U.S. Department of Transportation
Federal Aviation Administration

FAA PAR

Federal Aviation Administration

Performance *and* Accountability Report

Fiscal Year **2021**

The FAA. Advancing Aviation.

MISSION VISION & VALUES

Our Mission

To provide the safest, most efficient aerospace system in the world.

Our Vision

We strive to reach the next level of safety and efficiency and to demonstrate global leadership in how we safely integrate new users and technologies into our aviation system. We are accountable to the American public and our aviation stakeholders.

Our Values

Safety Is Our Passion

We work so that all air and space travelers arrive safely at their destinations.

Excellence Is Our Promise

We seek results that embody professionalism, transparency, and accountability.

Integrity Is Our Touchstone

We perform our duties honestly, with moral soundness, and with the highest level of ethics.

People Are Our Strength

Our success depends on the respect, diversity, collaboration, and commitment of our workforce.

Innovation Is Our Signature

We foster creativity and vision to provide solutions beyond today's boundaries.

Cover: Installation of exterior metal panels on the new Portland International Airport and P80 Terminal Radar Approach Control Administrative Support Building in Oregon. This project is expected to be completed in late 2021. Photo by James Ryan Smith, FAA Civil Engineer.

This page: Photo by Natali Quijano/Unsplashed.com.

THIS REPORT AND REPORTS FROM PRIOR YEARS ARE AVAILABLE ON THE FAA WEBSITE

www.faa.gov/about/plans_reports/#performance

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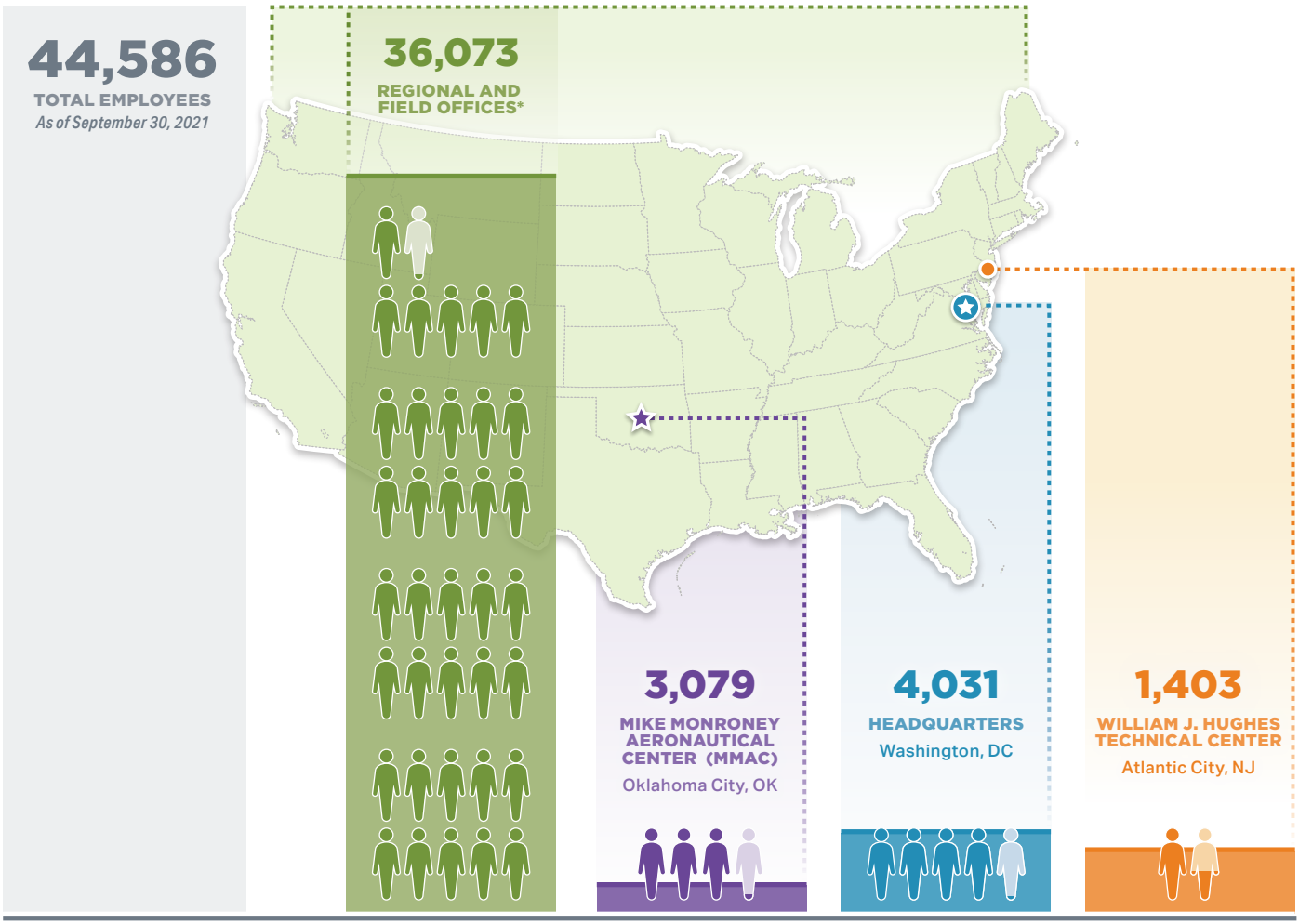
All sections of this document are unaudited, with the exception of the Financial Statements and the Notes to the Financial Statements (pages 98–133).

IN A DAY'S WORK



*** Regional and field offices** include 1,797 FAA employees outside the continental U.S. as follows: 1,123 in Alaska, 363 in Hawaii, 285 in U.S. territories, and 26 in foreign countries.

KEY: = 1,000 people

TOTAL BUDGET

$27.97 BILLION

Enacted for Fiscal Year 2021*

Refer to pages 32–34 for more information.

OPERATIONS

$11.0 BILLION

RELIEF FOR AIRPORTS

$8.0 BILLION

GRANTS-IN-AID FOR AIRPORTS

$5.75 BILLION

- **$3.75 BILLION** for airport capital grants
- **$2 BILLION** for COVID-19-related supplemental funding

FACILITIES & EQUIPMENT

$3.02 BILLION

RESEARCH, ENGINEERING, & DEVELOPMENT

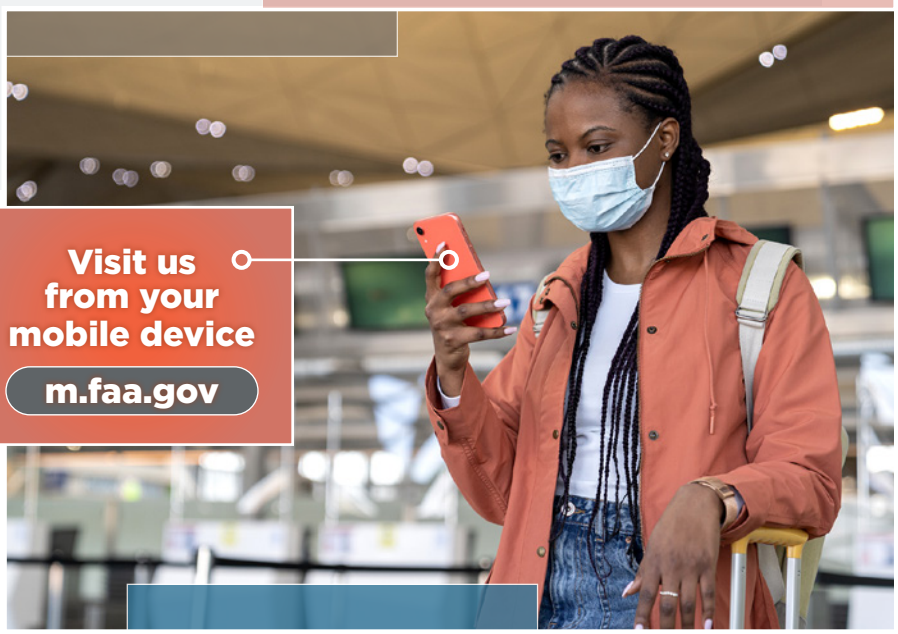
$0.2 BILLION

* This total includes $9 million provided for the Emergency Leave Fund account.

FOREWORD

The Federal Aviation Administration (FAA) is part of the U.S. Department of Transportation (DOT). By directives, the Office of Management and Budget, with statutory authority from the Chief Financial Officers Act of 1990, requires the FAA to prepare financial statements separate from those of the DOT. The FAA consolidates its key data and information and provides it to the DOT to incorporate into their corresponding reports. Although the FAA is not required to prepare a separate Agency Financial Report or Performance and Accountability Report (PAR), it does so to better demonstrate the agency's accountability by presenting performance, management, and financial information using the same statutory and guidance framework as that used by the DOT. For this reason, the FAA has produced its own PAR since fiscal year (FY) 2002.

The FAA is committed to providing the safest, most efficient aerospace system in the world, and fulfilling its mission in a fiscally responsible and transparent manner. This commitment is ongoing and the FAA is proud of the recognition we have received over the years for transparent reporting of our performance and accountability. The Certificate of Excellence in Accountability Reporting (CEAR) award program was established by the Association of Government Accountants in collaboration with the Chief Financial Officers Council and the Office of Management and Budget to improve government accountability by streamlining reporting and improving the effectiveness of reports. Receiving the CEAR award is a significant accomplishment for a federal agency and ***the FAA is proud to have received the prestigious CEAR award 17 of the last 18 years***. We are also extremely honored to have been recognized seven times in the past with special "best in class" awards for elements of our PAR that were considered to be the best across all of government. ***For the FY 2020 PAR, the FAA received another "best in class" award***, for "A Report That Tells A Story". This award recognized the FAA's PAR as one that told a compelling story, highlighted agency relevance on key public interest matters, featured agency day-to-day operations, and integrated photographs and graphics to explain the agency's performance to capture—and retain—reader interest. FAA is extremely proud to have been recognized with this special award.



The success of our financial stewardship is due to the diligent efforts of our employees who practice sound fiscal policies in supporting our mission, programs, and systems. We thank our people for their dedication and commitment to our mission and their transparent reporting of the important work of the agency.

A MESSAGE *from the* ADMINISTRATOR

STEVE DICKSON

Fiscal Year 2021 was a year like no other. The COVID-19 global pandemic continued to cause disruption to air travel and the aerospace industry throughout the year. New risks and challenges appeared, from unruly passengers to logistical difficulties caused by a speedy return to near-normal air traffic levels. Despite these hurdles, I'm proud to report that the nation's airspace continues to be the safest in the world. Our workforce rose to the challenge, and we emerged a stronger and more resilient agency.

As part of this new environment, we continued to develop tools and ways of accomplishing our work remotely. Our aviation safety inspectors are leveraging remote technologies to help us continue our oversight duties even amidst the pandemic. Our Office of Airports issued billions of dollars in grants that ensured the viability of our nation's airport network, even amidst the largest sustained drop in air traffic in modern times. Even now, our Office of Airports employees are busily moving COVID-relief funding to airports across the nation to help them manage the economic downturn.

> *"I'm proud to report that the nation's airspace continues to be the safest in the world."*

Our workforce was particularly resilient this past year. To combat the threats related to the COVID-19 pandemic, about 60 percent of FAA employees quickly pivoted to an expanded telework posture to adhere to safety protocols. Of course, many did not have that option. In particular, I would like to recognize our inspectors, air traffic controllers, technicians, and the many others who continued to report to work on-site over the past year. You can find more details about our COVID-19 response efforts on pages 12–13.

Yes, we experienced significant challenges in FY 2021, but we also made tremendous progress in key areas, including commercial space and unmanned aircraft. This has been an incredibly exciting time for the U.S. in space. The world recently watched National Aeronautics and Space Administration's (NASA) Perseverance rover land on Mars, and the Ingenuity helicopter succeed in its Wright-brothers-moment on the red planet, as well as a dozen more flights and counting. Last year, we saw American astronauts launch into orbit aboard an American-built rocket—the first since the end of the Space Shuttle program in 2011. This year saw the addition of two new commercial human spaceflight missions, both in the same two-week period, and even an all-civilian flight that orbited the Earth for three days. We also published a final rule that fundamentally changes and streamlines how the agency regulates and licenses commercial space launch and reentry operations while always preserving public safety. This will allow us to evolve alongside industry as the pace of space travel continues to accelerate.

The FAA completed another step toward integrating unmanned aircraft systems—drones—into the nation's airspace. We published two new rules: Operation of Small Unmanned Aircraft Systems (UAS) over People and the Remote Identification rule. The first rule modifies the existing Small UAS rule to enable even more kinds of operations without needing operators to request a waiver. The Remote Identification rule addresses aviation safety and security issues and is an essential building block toward safely allowing complex operations. Together, these two rules bring unmanned aircraft that much closer to full integration into the nation's airspace.

Another significant achievement this year was the return to service of the 737 MAX airplane. Over a period of 20 months, the FAA engaged in a rigorous and transparent review of the aircraft and ultimately found that Boeing's design changes met FAA safety standards. Therefore, on November 18,

> *The foundation of the FAA is our people—and we are stronger, more innovative, and more successful when all talents and experiences are recognized.*

2020, I signed a rescission of the FAA order that grounded the aircraft. This was possible only because of the thorough and deliberate safety processes the FAA completed to ensure that all of the unsafe conditions were corrected. We then posted an Airworthiness Directive that specified the steps U.S. operators must accomplish before returning their existing fleet of 737 MAX airplanes to service. We committed from the start to boost global aviation safety through the hard lessons learned from the tragic Lion Air and Ethiopian Airlines accidents. We are keeping that commitment and focus by incorporating these lessons learned throughout the safety lifecycle.

We also made progress in our workforce and environmental responsibilities. We've established a five-year Diversity, Equity, and Inclusion Strategic Plan for the FAA that will deliver the most diverse organization in our history. The foundation of the FAA is our people—and we are stronger, more innovative, and more successful when all talents and experiences are recognized.

This year we selected the next round of award recipients as part of FAA's Continuous Lower Energy, Emissions, and Noise (CLEEN) Program, which is the FAA's principal environmental effort to accelerate the development of new aircraft and engine technologies. CLEEN projects develop technologies that will reduce noise, emissions, and fuel burn and enable the aviation industry to expedite integration of these technologies into current and future aircraft.

FAA Reauthorization & Aircraft Certification, Safety, and Accountability Act

The FAA Reauthorization Act of 2018, Public Law 115-254, was signed into law on October 5, 2018. The Act is wide-ranging and provides the FAA with a host of critical new authorities and responsibilities on a broad range of aviation issues, including enhancing safety, improving infrastructure, and enabling innovation. Over the past year, the agency has continued to make significant progress on fulfilling the Congressional mandates in the Act, even while dealing with

The FAA's cooperation with the Able Flight program has enabled scores of persons with disabilities to explore their love of flying. Above, Curtis Stanley, who went through the Able Flight program in 2014, stands in front of his light sport aircraft.

challenges associated with the COVID-19 pandemic. For example, we created an Aviation Workforce Development Grant Program to help develop a pipeline of skilled aviation professionals by providing grants to educational programs for aircraft pilots and aviation maintenance technicians. We also selected five airports at which we will test UAS detection and mitigation technologies to assess impacts on safe airport operations, navigation, air traffic services, and the safe and efficient operation of the nation's airspace. We are in the process of choosing detection and mitigation systems and expect to initiate testing in the coming months.

> ***"This agency will continue to move forward in aviation safety, aerospace system performance, and innovation to deliver a world-class national airspace system."***

On December 27, 2019 the U.S. Congress passed the Aircraft Certification, Safety, and Accountability Act. This legislation included over 100 provisions aimed at reforming how the FAA conducts aircraft certification. The FAA is committed to a comprehensive approach to implementing all the requirements of, as well as the recommendations from, investigations and independent reviews related to the 737 MAX. For more information on our efforts, see pages 14–15.

Performance Highlights

The FAA strategic plan, which aligns with the DOT's strategic plan, has four priority areas: Safety, People, Global Leadership, and Operational Excellence. In FY 2021, we achieved all of the agency's 20 performance measures. A summary of results for all 20 performance measures is provided on pages 22–24 in the Management's Discussion and Analysis section. Detailed information appears in the Performance Results section, which begins on page 42.

Financial Accountability

The FAA remains committed to ensuring transparency and accountability to the public while achieving our mission. This report's performance and financial data are complete and accurate, providing a comprehensive representation of agency results. Furthermore, for the fifteenth consecutive year, independent auditors gave our agency an unmodified audit opinion on our financial statements. The independent auditors' report appears on page 92, while my statement of assurance appears on page 41. The FY 2021 Performance and Accountability Report, as well as a summary document, can be accessed online at: ***https://www.faa.gov/about/plans_reports/#performance***.

Conclusion

The FAA continues to demonstrate its resiliency and commitment to meeting the nation's aerospace challenges. Our workforce has demonstrated the flexibility and ingenuity to adapt to challenging circumstances and a myriad of obstacles. Collaborating with aviation industry professionals, this agency will continue to move forward in aviation safety, aerospace system performance, and innovation to deliver a world-class national airspace system. Whatever the future holds, the FAA will be ready!

STEVE DICKSON
Administrator
November 9, 2021

Photo of concrete wall formations at the glide slope shelter and antenna location, part of the Runway Extension Project at Chicago O'Hare International Airport. A glide slope helps navigate the descent of equipped aircraft. Photo by Steven J. Mueller.

MANAGEMENT'S DISCUSSION & ANALYSIS

Passengers traveling through Charlotte Douglas International Airport in North Carolina in January 2021. Photo by Joel Carillet/iStock Images.

Milestones in Aviation History

1903

DECEMBER 17
Orville and Wilbur Wright made the first successful flight in a self-propelled airplane.

1910

SEPTEMBER 16
Bessica Raiche made the first accredited solo flight by a woman in the U.S.

1911

AUGUST 1
Harriet Quimby became the first U.S. woman to earn an Aero Club of America aviator's certificate. In 1912, she became the first woman to fly across the English Channel.

1918

MAY 15
The Post Office began scheduled air mail service, using Army pilots and, on
AUGUST 12
began flying the mail with its own pilots.

History of Modern Aviation and the Creation of the FAA

Without regulation, early aviation remained in the realm of daredevils. Early pilots, male and female, pushed one another to set, and then break a host of aviation records for speed, flight duration, and aerobatics. Without navigation aids, pilots flew 200 to 500 feet above the ground so they could navigate by roads and railways. Fatal accidents were routine.

The Airmail Act of 1925 facilitated the growth of the commercial airline business. The legislation required the Post Office Department to contract with airlines to carry the mail. As a result, a number of airlines began mail delivery service. These airline operators found they could be more profitable if they also carried passengers. The high number of accidents, however, made many potential passengers afraid to fly.

Aviation industry leaders sought federal action to improve and maintain safety standards so the aviation industry could reach its full commercial potential. At their urging, the U.S. Congress passed the Air Commerce Act of 1926. This landmark legislation established the first federal regulation of aviation by directing the Secretary of Commerce to foster air commerce, license pilots, certify aircraft, establish airways, and operate and maintain aids to air navigation. With safety regulations in place and public confidence growing, aviation quickly became a vital national resource providing opportunities for travel, new business ventures, and jobs.

As the aviation industry grew, so too did federal responsibilities. Over time, new federal oversight areas included air traffic control, airport safety, licensing pilots, and certifying aircraft.

Washington National Airport in the 1940s, since renamed Ronald Reagan Washington National Airport. The Civil Aeronautics Authority, which later became the FAA, owned and operated the airport at the time this photo was taken. FAA photo.

The Federal Aviation Act of 1958 created the FAA largely as we know it today. Since that time, with the continued evolution of aeronautics, the agency has addressed a wide variety of issues, including aircraft noise, security, international cooperation, and commercial space.

Aviation today remains as challenging as ever. Innovation in aeronautics and astronautics continues even amidst a global pandemic. New commercial space activities are taking civilians into space, unmanned aircraft are taking flight in ever-increasing numbers, the aviation industry continues to expand, and our list of partners is growing. As it always has, the FAA stands ready to tackle both current and future challenges with the same energy that it has for the last 63 years.

Starting on page 8 and continuing to page 19, we have compiled a timeline of some major accomplishments in the context of aerospace history.

History continued

1921

JUNE 15
Bessie Coleman became the first African American in the world to earn a pilot's license. Since the U.S. was not yet issuing such licenses, she earned her license in France from the Federation Aeronautique Internationale.

1926

MARCH 16
Robert H. Goddard made the first free flight of a liquid-fueled rocket in Auburn, Massachusetts.

MAY 20
President Calvin Coolidge signed the Air Commerce Act, establishing federal control over civil aviation.

1927

APRIL 6
William P. MacCracken, Jr., Assistant Secretary of Commerce for Aeronautics, received Pilot License No. 1, the first such license issued by the federal government.

MAY 20-21
Charles Lindbergh made the first nonstop solo flight across the Atlantic.

FAA Organization

The FAA fulfills its mission through five lines of business that work collaboratively with the aviation and aerospace industry, as well as other key stakeholders, to develop, operate, and maintain the national air transportation system.

- **Air Traffic Organization (ATO).** ATO is responsible for providing safe and efficient air navigation services for 29.4 million square miles of airspace. This represents more than 17 percent of the world's airspace and includes all of the U.S. and large portions of the Atlantic and Pacific Oceans and the Gulf of Mexico. ATO employees are the service providers—the controllers, technicians, engineers, environmental specialists, and other support personnel—whose daily efforts keep aircraft moving safely and efficiently through the sky.
- **Airports (ARP).** ARP provides leadership in planning and developing a safe and efficient national airport system. The office is responsible for all programs related to airport safety and certification inspections, and for standards of airport design, construction, and operation, including international harmonization of airport standards. ARP also awards Airport Improvement Program grants, including COVID-Relief grants, and authorizes Passenger Facility Charge collections. Additionally, ARP is responsible for national airport planning and environmental and social requirements, as well as establishing policies related to airport rates and charges, compliance with grant assurances, and airport privatization.
- **Aviation Safety (AVS).** AVS is responsible for the certification, production approval, and continued airworthiness of aircraft, as well as the certification of pilots, mechanics, and others in safety-related positions. AVS is also responsible for certifying operators and maintenance organizations, certifying and overseeing approximately 7,300 U.S. commercial airlines and air operators, developing regulations, and conducting aerospace medical and human factors research.

WATCH OUR VIDEO:
WHO WE ARE AND WHAT WE DO – "FAA 101"
https://www.youtube.com/watch?v=9KguBoIHI4I

- **Security and Hazardous Materials Safety (ASH).** ASH protects critical FAA assets, personnel, and the flying public from security risks, including criminal, terrorist, and insider threat actions. This is done through 24/7 emergency preparedness and response; global aviation situational awareness; intelligence threat identification, warning, and analysis; robust regulatory investigations; and providing support and education to law enforcement organizations investigating FAA certificated entities, personnel, and facility security programs. ASH collaborates within FAA and with interagency, industry, and foreign partners to provide national security support and to ensure the safety of the transportation of hazardous materials (HAZMAT) in air commerce. ASH helps prevent HAZMAT-related accidents or incidents aboard aircraft using targeted, risk-based oversight, as well as education, outreach, and stakeholder engagement both domestically and internationally.
- **Commercial Space Transportation (AST).** AST ensures protection of the public, property, and the national security and foreign policy interests of the U.S. during commercial space launch and reentry activities. AST does this through authorizing launches and reentry operations and by licensing launch and reentry sites. AST also encourages, facilitates, and promotes the U.S. commercial space transportation industry, with due consideration of environmental issues.

The FAA has nine staff offices that support these lines of business and enable the accomplishment of the agency's mission. Key among these staff offices are:

- **Finance and Management (AFN).** AFN functions as the FAA's shared services organization, responsible

History continued

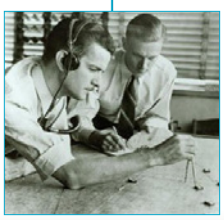
1932

MAY 21-22
Amelia Earhart became the first woman to make a solo crossing of the Atlantic by airplane.

1935

APRIL 2
British scientist Sir Robert Watson-Watt patented the first practical radar (radio detection and ranging) system.

1936

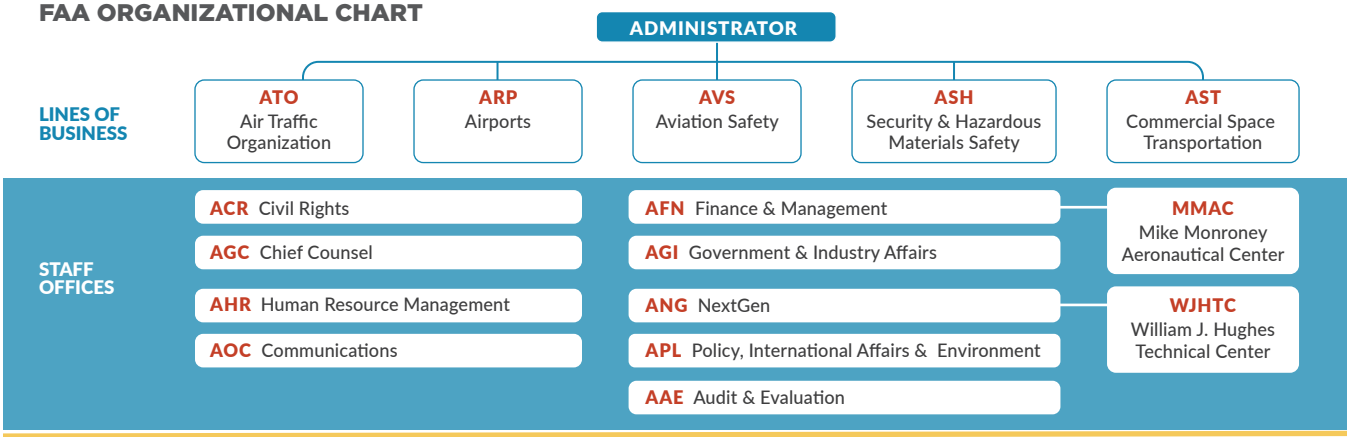


JULY 6
Federal en route air traffic control began as the Bureau of Air Commerce took over operation of the three airway traffic control stations at Newark, Chicago, and Cleveland.

1938

JUNE 22
Willa Brown received her private pilot's license. She later became one of the first African-American women to earn a commercial pilot's license and the first African-American woman officer in the Civil Air Patrol.

FAA ORGANIZATIONAL CHART



for providing common business services through a consolidated, integrated approach. AFN delivers high-quality, efficient, and reliable finance, acquisitions, contracting, information technology, property, logistics, and technical training services across the agency. AFN helps streamline functions to ensure they are delivered as effectively and efficiently as possible.

- The Mike Monroney Aeronautical Center (MMAC). The MMAC, part of AFN, provides unique functions in support of the FAA's mission. Services include: technical training for air traffic controllers, technicians, and engineers; providing financial, information systems security, technology, and business services solutions for customers across the DOT and federal government; and facility management services to all tenants. Several non-AFN FAA lines of business have operations located at the MMAC, as well. Additional information on the MMAC can be found on page 36.

- **NextGen (ANG).** ANG provides leadership in planning and developing the Next Generation Air Transportation System (NextGen). This office coordinates NextGen initiatives, programs, and policy development across the FAA. ANG also works with other federal and state government agencies, the FAA's international counterparts, and members of the aviation community to ensure harmonization of NextGen policies and procedures.
  - The William J. Hughes Technical Center (Technical Center). The Technical Center, part of ANG, is the nation's premier air transportation laboratory. Technical Center employees conduct research, development, test and evaluation, and sustainment of the full spectrum of aviation systems, including communications, surveillance, navigation, traffic flow management, and weather systems. The Technical Center laboratories provide a platform to identify integrated solutions for the modernization and sustainment of the national airspace system, and for delivering NextGen operational capabilities. Additional information on the Technical Center can be found on page 20.

As shown in the FAA Organizational Chart above, the FAA also has the following seven additional Staff Offices: Civil Rights, Chief Counsel, Human Resource Management, Communications, Government & Industry Affairs, Policy, International Affairs & Environment, and Audit & Evaluation.

For more information about FAA lines of business and staff offices, please visit ***www.faa.gov/about/office_org***.

History continued

1938

JUNE 23
President Franklin Roosevelt signed the Civil Aeronautics Act of 1938 into law, which transferred federal responsibilities for civil aviation from the Bureau of Air Commerce to a new, independent agency, the Civil Aeronautics Authority.

1941

Oscar Holmes, the first known African-American to become a federal air traffic controller, joined the Civil Aeronautics Authority.

NOVEMBER 1
The Civil Aeronautics Authority began operating airport traffic control towers and later that year began hiring and training women to be air traffic controllers.

1947

OCTOBER 14
Maj. Charles E. Yeager, U.S. Air Force, piloting the Bell X-1 rocket-propelled research aircraft at Muroc, CA, became the first pilot to break the sound barrier.

FAA IN ACTION: COVID-19 PANDEMIC

The COVID-19 global pandemic continues to challenge the FAA in unprecedented ways. Almost two years into this pandemic, the FAA continues to face and resolve challenges that would have been unimaginable just two years ago. Last year FAA was in emergency mode—responding to the crisis, doing everything in its power to protect its people and carry out its mission. This year the FAA has adapted to ensure we continue to provide the safest aerospace system in the world.

Protecting our People

The initial phases of the pandemic saw the FAA quickly pivot to protect our workforce while still supporting the aviation sector. We took steps to protect our employees, shifting to a maximum telework posture for colleagues whose work allowed it, and socially distanced the rest to reduce their potential exposure. Working within our regulatory structure, we granted exemptions to allow passenger planes to deliver much needed cargo. Finally, we worked with industry to shift toward an environment with a very low volume of air traffic.

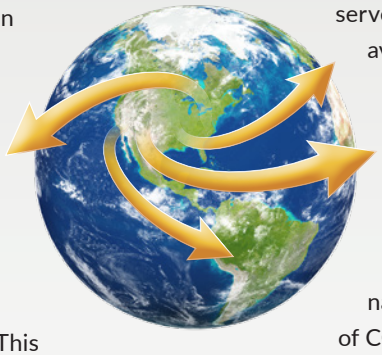
During FY 2021, our environment continued to change, but our priorities did not. We continued to consult with federal health officials to ensure we were taking every step available to us to ensure the safety of our workforce. Early in the pandemic, when air traffic dropped substantially, the FAA adjusted the number of personnel on shifts to match the reduced demand and cut back on in-person training, allowing us to reduce crews' potential exposure to one another. As air traffic began to return, we increased staffing to match demand and used new federal protocols based on more data to protect our team. We used personal protective equipment, implemented thorough and more frequent cleanings, and tracked COVID-19 cases.

In response to the continuing pandemic, the FAA instituted a new cleaning protocol. Since the beginning of the pandemic, the FAA has conducted intensive cleanings in response to cases of COVID-19. Today, our busiest facilities undergo thorough, scheduled COVID-19 cleanings every day, regardless of whether they experience a positive COVID-19 case. This cleaning regimen is now in place in 120 high-priority facilities, including the busiest airport control towers. Facilities are able to schedule the proactive daily cleanings for the slowest traffic periods. The crews that perform the daily cleanings in the operational areas use non-toxic, EPA-approved chemicals, following Centers for Disease Control and Prevention guidelines, so controllers and technicians are able to continue working while cleaning takes place around them. At the beginning of the pandemic, the agency closed affected facilities for several days after a positive case of COVID-19 while cleaning was planned and executed. With experience, cleaning can now be completed in a few hours, generally on an overnight shift. So far, this protocol allowed facilities to remain open and operational in more than 478 instances where they would have closed for cleaning under the previous cleaning regimen.

Whenever a facility did have to shut down due to exposure to COVID-19, prior investments in telecommunications infrastructure paid off. Protocols were set up in order to transfer control of flights to neighboring facilities, or to move controllers to contingency sites. The FAA went to great strides to ensure the flying public could continue to safely traverse the skies.

Leading Internationally

The FAA also worked to share our best COVID-19 practices with the world. The FAA has been closely involved in the work of the International Civil Aviation Organization's (ICAO) Council Aviation Recovery Task Force (CART) to develop global pandemic risk mitigation measures. The FAA supported U.S. leadership in ICAO at a time when it was drastically needed. The FAA led the time-critical development of guidance that ICAO Member States and global aviation partners needed, and are still using, to facilitate a safe, coordinated approach to a global aviation system recovery from the COVID-19 pandemic. This approach took into account industry perspectives so as to minimize unnecessary operational impacts to the airline and cargo industry. For more on CART and the FAA's involvement, look to pages 61–62.



Delivering Vaccines

With the creation of the COVID-19 vaccines, the FAA took action to ensure they were swiftly delivered to their intended destinations. Several vaccines need continued cold temperatures during transport, which may require dry ice (a hazardous material) to maintain very low temperature. The FAA provided guidance on implementing current regulatory requirements for safely transporting large quantities of dry ice in air cargo. FAA then worked with stakeholders to determine any additional needs for air navigation services support. These include prioritizing flights carrying COVID-19 vaccines, as well as offering around-the-clock air traffic services to keep air cargo moving seamlessly and providing personnel critical to the nation's response to and recovery from COVID-19.

Dry ice testing at the FAA's William J. Hughes Technical Center. FAA photo.

Keeping the Nation's Airspace Operating

This year saw a continuation of the U.S. government's commitment to preserve the network of airports that serve both commercial airlines as well as general aviation. The U.S. Congress passed two distinct laws aimed at preserving this critical network: the Coronavirus Response and Relief Supplemental Appropriations Act, 2021 (CRRSA) and American Rescue Plan Act of 2021 (ARPA). CRRSA provided the FAA an additional $2 billion and ARPA provided another $8 billion to help the nation's airports contend with the financial impacts of COVID-19. These critical grant programs build on grants provided last year in the Coronavirus Aid, Relief, and Economic Security (CARES) Act to support airports during these unprecedented times.

The FAA has also continued to accomplish its work despite COVID-19 related mitigations in the workplace. Our Air Traffic Organization employed remote capabilities for everything from system testing to conducting safety panels and site surveys. FAA has developed and tested both software and hardware systems that are awaiting availability of facilities in order to begin operational tests. Our Office of Aviation Safety is leveraging modern technology to continue remotely conducting certification activities. The FAA is continuously developing new ways to achieve its mission in this new environment.

While facility access remains limited, the FAA has still been able to complete some major air traffic control projects. For instance, we implemented the final two metroplex projects, in Las Vegas in February 2021 and in South-Central Florida in August 2021. These projects use integrated NextGen capabilities to improve airspace usage at a regional level encompassing multiple airports.

Our national airspace system continues to change due to the COVID-19 pandemic. While FAA has successfully continued to respond to these events, they are still unfolding. As long as restrictions on facility access continue, delays in the deployment of new systems will increase. The impacts to FAA's people and finances continue to compound, but the FAA's resilience and agility has proven itself up to the task and we will prevail in our mission to provide the safest aerospace system in the world.

Major Accomplishments, Challenges, and Tomorrow's Drivers of Change

This year the FAA made significant progress at tackling several of its major challenges. However, much work remains to be done in order to both overcome our biggest challenges, as well as to maximize the opportunities new technologies can offer the flying public. The following sections highlight areas where the FAA is taking significant steps to ensure our national airspace remains the safest in the world.

Aircraft Certification Reform

Three years ago, 346 lives were tragically lost in Indonesia and Ethiopia with the crashes of two 737 MAX airplanes. The FAA is committed to ensuring that accidents like these never occur again. Immediately after grounding the 737 MAX in 2019, the FAA began a contentious, rigorous, and transparent review of design changes to the 737 MAX flight control system and pilot training requirements. After a thorough 20-month review, FAA approved Boeing's design and pilot training requirement changes, finding they met FAA safety standards and supported a return to service of the Boeing 737 MAX. On November 18, 2020, the FAA Administrator signed a rescission of the FAA order that grounded the 737 MAX. The FAA also published an Airworthiness Directive that specified the steps U.S. operators must accomplish before returning their existing fleet of 737 MAX airplanes to service. The decision to un-ground the airplane was based on the FAA's thorough and deliberate safety processes. The design and certification of this aircraft included an unprecedented level of concurrent and independent reviews by aviation authorities around the world. Those regulators have indicated that Boeing's design changes, together with the changes to crew procedures and training enhancements, give them the confidence to validate the aircraft as safe to fly in their respective regions.

FAA Administrator, Steve Dickson, inspecting the 737 MAX. FAA photo.

Looking forward to the challenges ahead, FAA is committed to a comprehensive approach to implementing the recommendations from investigations and independent reviews related to the 737 MAX, as well as all the requirements of the Aircraft Certification, Safety, and Accountability Act. To accomplish this, the FAA is driving greater transparency, collaboration, and accountability across the regulating and regulated communities. We identified the following general themes, which we are addressing across all of our work:

- Treat aircraft as complex systems, with full consideration of how all the elements in the operating system interact.
- Integrate human factors considerations more effectively throughout all aspects of the design and certification process.
- Improve the agency's oversight process by ensuring coordinated and flexible flow of data and information.
- Focus on the workforce of the future and develop expertise to evaluate technological advances.

The FAA has already made progress on some of these requirements. For example, the FAA has implemented a voluntary safety reporting program, which provides all Aviation Safety Organization employees with a system to report

History continued

1953

MAY 18
Pilot Jacqueline Cochran became the first female pilot to break the sound barrier. Previously, she served as the head of the Women Airforce Service Pilots and was a sponsor of the Mercury 13 women astronaut program.

1956

JUNE 30
A Trans World Airlines Super Constellation and a United Air Lines DC-7 collided over the Grand Canyon in AZ, killing all 128 occupants of the two airplanes. The accident led directly to legislation creating the Federal Aviation Agency.

1957

DECEMBER 20
The jet age began in the U.S. with the first flight of the Boeing 707.

1958

AUGUST 23
President Eisenhower signed the Federal Aviation Act of 1958, creating the independent Federal Aviation Agency. The agency began operations on December 31.

aviation-safety-related issues and concerns anonymously and without fear or concern for retaliation for making a safety disclosure.

Unmanned Aircraft Systems

It's hard to understand just how big a leap unmanned aircraft systems (UAS), or drones as they are commonly known, integration has taken in the last five years. The first FAA regulations regarding UAS came out in 2015 with the Registration and Marking Requirements for Small Unmanned Aircraft interim final rule. Shortly thereafter, in 2016, the FAA enabled limited operations for small UAS with a new set of regulations that are commonly called the "small UAS rule."

This last year has seen the FAA take significant steps towards integrating this new entrant into the nation's airspace. The recently finalized rules for Operation of Small Unmanned Aircraft Systems (sUAS) Over People (amendment to 14 Code of Federal Regulations part 107) and UAS Remote Identification (14 Code of Federal Regulations part 89) will further UAS integration.

The original part 107 regulations only authorized certain types of operations. Flying under part 107 meant staying in Class G airspace (airspace not managed by the air traffic control) unless authorized by the FAA, flying during the day, and keeping the UAS within your line of sight. If an operator wanted to fly over people, at night, or beyond their visual line of sight, they needed to request a waiver or an exemption from the FAA. The recent amendment to part 107 allows UAS operators to fly in more situations, increasing the economic and recreational potential of drones. Now allowed under this new rulemaking activity, routine night operations began in spring 2021, while operations over people are expected to begin within the next 6-18 months, depending on the UAS being flown.

Publishing the Remote Identification (ID) of Unmanned Aircraft Final Rule this past year was the next incremental step towards further integration of unmanned aircraft in the national airspace. Remote ID is similar to a "digital license plate" for an unmanned aircraft. From a security perspective, Remote ID will enable the FAA to connect a drone to its operator and is the cornerstone for threat discrimination by law enforcement. With Remote ID, law enforcement and national security partners will be in a better position to locate the operator, determine if a drone is being operated in an unauthorized or inappropriate manner, and take appropriate action if necessary. The operator's UAS serial number and location information will be available to anyone within range who has Remote ID broadcast receiver technology on their personal wireless device, such as a smart phone. However, only authorized government agencies and law enforcement can request the more detailed registration information from the FAA. Full Remote ID compliance will become mandatory in fall 2023.

Looking ahead, the FAA is working to expand drone operations beyond what is currently allowed under part 107 regulations. In the past few years the focus was on using the existing regulatory regime to enable operations. The FAA gained valuable knowledge and data by approving special use operations through waivers. Operators who received waivers were able to build their safety cases and fly thousands of missions. The lessons learned through these initial operations led to the Operation of sUAS over People amendment. This amendment expanded UAS operations based on years of data of safe flying applications. FAA has learned, however, that because the waiver process is labor-intensive it is not scalable for certain UAS operations envisioned for the future, such as package delivery. The FAA expects to craft rules, policy, and guidance that would enable future safe, routine operations without the need for waivers.

One of the next steps in UAS integration involves Beyond Visual Line-of-Sight Operations (BVLOS) operations, which

History continued

1958

OCTOBER 1
The National Aeronautics and Space Act of 1958 created the National Aeronautics and Space Administration (NASA).

1961

FEBRUARY 26
Aviation weather services were expanded to include pilot weather briefings and handling air-to-ground weather requests.

1962

FEBRUARY 20
John H. Glenn, Jr., piloted the first U.S. manned orbital flight.

1964

APRIL 17
Geraldine Mock completed the first solo flight around the world by a woman.

1967

APRIL 1
The Department of Transportation and the National Transportation Safety Board began operations.

Sharing the Skies Safely, An Overview of Unmanned Traffic Management, discusses the kind of situational awareness that will be needed in the near future to keep UAS safely apart from each other and from manned traffic.

are only permitted with a waiver under part 107. The FAA announced on June 8, 2021, the UAS Beyond Visual Line-of-Sight Operations Aviation Rulemaking Committee (UAS BVLOS ARC). The UAS BVLOS ARC is co-chaired by the FAA and industry partners and includes over 80 members of the aviation community, including several international observers from various regulatory authorities and Air Navigation Service Providers. The objective of the UAS BVLOS ARC is to provide recommendations to the FAA for performance-based regulatory requirements to normalize safe, scalable, economically viable, and environmentally-sound BVLOS operations that are not actively managed by air traffic control.

The UAS BVLOS ARC is an opportunity to bring together stakeholders in the aviation industry, the U.S. Government, and the communities impacted by drone technology to determine the best regulatory path forward for BVLOS UAS operations. The FAA will consider the ARC's recommendations into its rulemaking effort(s).

Finally, an exciting area that will continue to pose challenges to the FAA for years to come is Advanced Air Mobility (AAM). AAM is a new concept of air transportation using innovative technologies, such as vertical takeoff and landing aircraft, to move people and cargo between places not served by existing surface or air transportation methods. AAM is a rapidly-emerging, new sector of the aerospace industry which aims to safely and efficiently integrate highly automated aircraft into the nation's airspace. Integrating AAM into our aviation system is a challenge because of the many different aspects in this groundbreaking arena. There are multiple unknowns—everything from what vehicles will look like to how they'll fit in with the current airspace system to how the emerging industry will function. As with any new initiative, the FAA must carry out and sustain robust community engagement before AAM can be successfully integrated into the national airspace.

The FAA is up for the challenge. AAM operations still have many similarities to traditional aviation. The FAA has spent decades identifying risks and creating regulations and procedures to ensure that all aircraft transporting people and goods are safe and secure. This means that initially AAM operations can take advantage of existing air traffic control infrastructure and low altitude visual flight rules, procedures, and routes. These first AAM operations can build widespread community awareness, which is a crucial first step toward realizing AAM's potential.

Commercial Space

On July 11th, 2021, the *VSS Unity*, a spaceplane piloted by Dave Mackay and Michael Masucci, carried four passengers to space. A week and a half later, on July 20th, the autonomous and reusable rocket, New Shepard, launched the *RSS First Step* capsule. Its four passengers reached a height just above the Kármán line (100 km), which is often used to define the edge

History continued

1968

Eleanor Williams began controller training; she earned her controller certification, becoming the first African-American female air traffic controller, in 1971.

1969

JULY 20
Astronauts Neil A. Armstrong and Edwin E. Aldrin, Jr., became the first people to land on the moon, while Michael Collins remained in lunar orbit. Later in the day, Armstrong and then Aldrin became the first to walk on the lunar surface.

1971

Wally Funk became the first woman to complete the FAA's General Aviation Operations Inspector Academy course. See more here: **https://www.youtube.com/watch?v=LiETX-56CYA&feature=youtu.be**

1973

At the age of 24, Bonnie Tiburzi was the first woman hired by a major airline as a member of the cockpit crew.

of the Earth's atmosphere and the beginning of outer space. These voyages, the first to be licensed to carry space flight participants by the FAA, are just two examples of the flurry of commercial space activity that took place in FY 2021.

In total, there were 59 FAA licensed rocket launches for the fiscal year, ***or about one every six days***. This is nearly double the licensed launches of fiscal year 2020. In addition to the two licensed commercial human spaceflights, in May 2021 four astronauts—one from the European Union, one from Japan, and two from the U.S.—reached the International Space Station aboard a SpaceX Falcon 9 rocket as part of the Crew-2 mission. This was the first FAA-licensed U.S. commercial space mission to fly an astronaut from the European Space Agency. Additionally, there are more than 20 other companies developing launch vehicles of different sizes and types seeking launch licenses in the near future.

To meet the growing rate in launch demand and complexity, the FAA developed a new regulation, part 450, that aims to increase flexibility of launch licensing. Published in March of 2021, FAA's streamlined launch and reentry licensing rule combines four separate regulations (parts 415, 417, 431, and 435) into a single performance-based part 450 rule. This new rule will better accommodate the evolving commercial space transportation industry, while preserving the FAA's safety record and environmental responsibilities. For more information on FAA's record of ensuring no harm on the uninvolved public, see page 51. Part 450 provides more flexibility in meeting regulatory approval because it encompasses more types of launch and reentry operations. It allows an applicant to propose unique means of compliance that meet the safety standards of the regulation. The FAA also published ten supporting advisory circulars that provide technically accurate compliance information to assist the space industry in meeting regulatory requirements.

As more rocket launch operators seek to share the nation's airspace, the FAA has deployed the space data integrator (SDI). This software delivers real-time telemetry data from the vehicle operator to the FAA Air Traffic Control System Command Center. The Command Center is in charge of overseeing and coordinating all of the air traffic throughout the entire national airspace system. Delivered data includes vehicle position, altitude, and speed, as well as indicators if the vehicle deviates from its expected flight path. This information allows the FAA to follow the progress of the vehicle along its planned path and monitor whether the vehicle is performing as planned. Launch and reentry vehicle operators delivered telemetry data via SDI on a voluntary basis, and in fiscal year 2021, the FAA partnered with SpaceX, Blue Origin, Astra, and the Alaska Aerospace Corporation to deliver their data for integration into SDI. This tool can be used to inform the use of Time Based Launch/Reentry Procedures (TBLP), as well as the Dynamic Launch/Reentry Windows (DLRW) that the FAA used at launch sites in Boca Chica, Texas and Van Horn, Texas. TBLP and DLRW are ways that the FAA uses data about launch and reentry operations in order to minimize the amount of time that airspace is closed to other commercial users. For more info on TBLP and DLRW, see page 75.

FAA sees the current cadence of rocket launch increases continuing. More complex and more frequent launches will continue to challenge the FAA. However, we are confident that we have the tools and safety measures in place to meet this challenge.

On November 15, 2020, FAA worked with **NASA and SpaceX** on the launch, reentry, and management of the airspace to ensure a safe and efficient launch of the first FAA-licensed orbital human space flight.

Watch more about this historic launch, here: **https://www.youtube.com/watch?v=nJzGeYFxoAY&feature=youtu.be**.

History continued

1976

JANUARY 21
The Concorde supersonic transport made its first commercial passenger flight.

1980

JANUARY
Olga Custodio graduated from the U.S. Air Force officer training school and became the first female Hispanic Air Force pilot. She subsequently became one of the first Hispanic commercial airline pilots.

1981

APRIL 12
NASA's space shuttle Columbia made its first orbital flight.

1983

JUNE 18
Sally Ride became the first U.S. woman in space.

1990

FEBRUARY 25
Prohibition of smoking went into effect on virtually all scheduled U.S. domestic airline flights.

Performance Highlights

The FAA is charged with promoting the safety and efficiency of the nation's aerospace system. We maintain the system's integrity and reliability through our broad authority to enforce safety regulations and conduct oversight of the civil aviation industry. Our strategic plan, annual business plans, human capital plans, annual PARs, and constant reevaluation of our efforts create a recurring cycle of planning, program execution, measurement, verification, and reporting. This cycle creates a strong link between the expenditure of our resources and our performance.

Managing Performance

We manage organizational performance through a four-step process that is based on best practices borrowed from several private and public-sector organizations:

- **Set Goals**
- **Plan, Work, and Budget**
- **Monitor Work**
- **Assess Results**

Each year we improve on this strategy through adaptation and enhancements of technologies that support the process.

Set Goals

The first step in the performance management process includes consulting with management, employees, and stakeholders to identify areas to target for improvement. These areas include near-term priorities and long-standing management challenges. Goals, performance measures, targets, and initiatives are laid out in the business plans developed by each of the FAA's lines of business and staff offices.

Plan, Work, and Budget

The second step in evaluating our performance focuses on planning, which begins with reviewing the critical activities and resources required to achieve our goals. Budget formulation involves a series of steps that the FAA takes to determine where a program or activity stands at present, where it is going (i.e., reasonable expectations for progress), and what else could be done (i.e., alternative approaches) to achieve stated objectives. One of the basic objectives of the budget formulation process is to ensure that decision-makers have the information they need to determine how best to allocate resources to achieve goals.

Our complete FY 2021 Congressional Justification can be found at: ***https://www.transportation.gov/mission/budget/faa-cj-fy-2021-estimates***.

The FAA also has a section in DOT's Budget Highlights document that summarizes the FY 2021 budget request. This document can be found at: ***https://www.transportation.gov/mission/budget/fiscal-year-2021-budget-highlights***.

In addition, our strategic initiatives and FY 2021 business plans for FAA organizations are available at: ***https://www.faa.gov/about/plans_reports/#business_plans***.

Monitor Work

Monitoring occurs in the course of the various performance management activities that our executives and employees participate in each month. The agency's overall governance model was revised in FY 2018 to streamline decision-making at the executive level. The revised model includes two groups—a Management Board and a Deputy's Meeting.

The Management Board provides agency-wide strategic direction and decision making for critical priorities. This includes setting short and long-term agency goals, as well as

History continued

1992

SEPTEMBER 12
Mae Jemison became the first African-American female in space.

1995

FEBRUARY 3
Eileen Collins became the first female NASA shuttle pilot.

1996

SEPTEMBER 19
FAA issued a license to Spaceport Systems International, allowing it to open the world's first privately-operated space launch facility, California Spaceport.

2001

NOVEMBER 19
Transportation Security Administration was founded.

2005

SEPTEMBER 28
FAA issued the first airworthiness certificate for a civil unmanned aerial vehicle, the General Atomics Altair.

making annual budget and financial decisions. The Board is the highest deliberative body in the agency and the primary forum to assist the Administrator in setting the agency's direction.

The Deputy's Meeting is the primary forum to advise and assist the Deputy Administrator in monitoring all operational activities conducted by the FAA (e.g., workforce, IT, and air traffic facilities). The Deputy's Meeting also refers decisions needed on significant internal issues to the Management Board.

The two groups create a well-defined process with clear roles for making decisions and monitoring the agency's performance; the groups clarify decisions across the FAA and clearly communicate decisions through senior leadership.

Assess Results

This is the final, but critically important step in the performance management process. Using performance information, the agency seeks ways to learn from past performance and improve outcomes. Performance measures and targets support our mission to provide the nation with a safe and efficient aerospace system. We have streamlined our strategic focus over the past several years. As our strategic management processes continue to mature and the focus becomes sharper, the number and mix of performance targets has changed. Targets are reviewed on a yearly basis to ensure that we are on track to meet future challenges.

Performance Goals

The FAA is currently updating its strategic plan that will establish new strategic goals and objectives for FY 2022 through FY 2026. The FAA's strategic goals align with the DOT's draft strategic plan. The FAA's strategic plan will describe overarching, long-term goals that the FAA aims to achieve, as well as the actions it will take to realize those goals. In alignment with the Administrator's vision, the new strategic goals are Safety, People, Global Leadership, and Operational Excellence. Innovation is the foundation of each strategic goal and it leads in the development of advanced aerospace capabilities that improve the safety and performance of our nation's aerospace system. Once completed, the strategic plan will be found here: ***https://www.faa.gov/about/plans_reports/***.

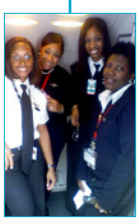
Each of the FAA's annual performance measures follow one of the long-term goals described in the agency's strategic plan:

- **Safety**: Oversee and operate the safest aerospace system in the world, all with a culture of continuous improvement. This year, the FAA was successful in achieving all eight measures related to Safety. For more information, please see page 44.
- **People**: Strengthen our current and future aviation workforce by holding ourselves accountable, developing our people and planning for the aviation workforce of the future. This year, the FAA was successful in achieving both measures related to People. For more information, please see page 56.
- **Global Leadership**: Advance global aviation safety, operational excellence, and innovation by leading and collaborating with aviation authorities globally. This year, the FAA was successful in achieving both measures related to Global Leadership. For more information, please see page 59.
- **Operational Excellence:** Operate the world's most efficient aerospace system through daily execution, continuous improvement, and infrastructure investment. This year, the FAA was successful in achieving all eight measures related to Operational Excellence. For more information, please see page 63.

History continued

"Whatever the future holds, the FAA will be ready."
— Steve Dickson

2009



FEBRUARY 12
Atlantic Southeast Airlines flights 5202 and 5106 became the first commercial jet revenue flights to be operated by an all-female, all-African-American crew.

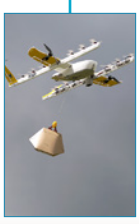
2012

MAY 22
The SpaceX Falcon 9 rocket launched and, on
MAY 25
became the first U.S. commercial space rocket to dock at the International Space Station.

2016

AUGUST 29
FAA implemented the first operational rules for routine non-hobbyist use of small Unmanned Aircraft Systems, or drones.

2019



APRIL 23
The FAA awarded the first air carrier certification to a drone delivery company, Wing Aviation, paving the way for the company to begin commercial package delivery and, on
OCTOBER 18
Wing Aviation and FedEx Express completed the first scheduled package delivery by drone to a house in Christiansburg, VA.

THE FAA WILLIAM J. HUGHES TECHNICAL CENTER

THE FAA WILLIAM J. HUGHES TECHNICAL CENTER (Technical Center) in Atlantic City, New Jersey, is the nation's premier air transportation system laboratory. Its highly diverse, technical workforce and vast array of world-class laboratories provide a state-of-the-art environment that enables research, engineering, development, test, and evaluation of advanced aviation technologies. These combined assets deliver next generation operational capabilities that modernize the nation's airspace system—the safest, most efficient aviation system in the world.

As the global COVID-19 pandemic continued and deepened into 2021, the ingenuity, innovation, and agility of the Technical Center workforce proved invaluable. The magnitude and impact of the pandemic was unforeseeable, but the Technical Center adapted quickly to the changing landscape without losing focus on achieving its goals. Key to attaining the goals of the Technical Center are its four focus areas: 1) advancing aviation technology, 2) cultivating a qualified aviation workforce of the future, 3) capitalizing on partnerships and outreach with government agencies and other entities, and 4) advancing core work that supports the other three goals. Some noteworthy accomplishments from FY 2021 are described below.

The Technical Center test and evaluation community leveraged advanced technologies to develop remote laboratory access capabilities that enabled developers, test engineers, air traffic controllers, and pilots all across the country to work together to continue the development, integration, and testing of national airspace system modifications and enhancements. A variety of methods and tools were developed and repurposed to enable continuity of test services during a maximum telework period. Now, test teams can collaborate with system developers and stakeholders from remote locations to develop test scenarios, conduct tests, verify requirements, and validate system functions in an operational environment. Consequently, test teams provided quality test and evaluation services across 78 acquisition programs delivering over 131 test products. The teams are also continuing to build a robust, agile, hybrid test environment with both remote and onsite capabilities.

As the nation's airspace system evolves to support emerging operations and new vehicle types, the Technical Center is supporting the safe integration of Advanced Air Mobility (AAM) concepts. AAM represents a future, automated air transportation system that will use new aircraft types to move people and cargo between places previously not served or underserved by aviation. Technical Center personnel created an integrated laboratory where AAM concepts can be demonstrated using simulated traffic from the manned and unmanned aircraft system traffic management. This capability will establish the Technical Center as a leader in AAM integration research. See more about AAM on page 21.

An important resource used by pilots and controllers to ensure aviation safety is voice communications. Voice communications are also one of the most resource-intensive aviation capabilities to simulate for human factors studies, operational tests, and training. The Technical Center developed an automated simulation pilot which can interpret spoken instructions from controllers and respond with realistic pilot voice communications and associated behaviors, such as changing speed, heading, and altitude. This simulation pilot integrates state-of-the-art machine learning speech recognition techniques with air traffic control information and communications systems to provide more accurate speech recognition performance and better determination of intent than is currently possible with commercially available tools.

Technical Center personnel also completed the development of the FAA's first classified cyber range facility—the Secure Enterprise Cyber Test Range. This facility creates opportunities for continued and expanded collaboration with the Department of Defense, Department of Homeland Security, and other government agencies. In addition, an Interagency Agreement established with the Department of Energy's National Renewable Energy Laboratory will support research into smart airports, including vehicle electrification, automation and mobility, optimized transportation systems, and ways to reduce carbon and greenhouse gas emissions.

Accelerating the Integration and Operationalization of Emerging Technologies

The FAA's William J. Hughes Technical Center is supporting the safe integration of Advanced Air Mobility (AAM) concepts which are illustrated in the above graphic. AAM, portrayed on the left side of the graphic, refers to a future automated air transportation system that will use new aircraft types to move people and cargo between places previously not served or underserved by aviation. Other traffic management concepts are portrayed on the right side of the graphic:

- **Upper Class E Air Traffic Management** – refers to operations that take place over 60,000 feet above mean sea level.
- **Air Traffic Management** – refers to the operation of airport towers, air route traffic control centers, and flight service stations, as well as the development of air traffic rules, designation of airspace use, and control of air traffic, in order to provide the safe and efficient use of navigable airspace.
- **UAS Traffic Management** – refers to traffic management of low-altitude uncontrolled operations—below 400 feet above ground level.

Performance at a Glance

Our FY 2021 performance is summarized in the following tables and discussed in detail in the Performance Results section. The measures are grouped according to the FAA's strategic goals. In FY 2021, the FAA achieved all 20 performance measures. The FAA has noted the measures for which the data provided are preliminary. A discussion of the methods used to validate the reporting performance information begins on page 76.

SAFETY

Oversee and operate the safest aerospace system in the world, all with a culture of continuous improvement.

Performance Measure	Org.	FY 2018 Results	FY 2019 Results	FY 2020 Results	FY 2021 Target	FY 2021 Results	FY 2021 Status
Commercial Air Carrier Fatality Rate* Reduce the commercial air carrier fatalities per 100 million persons on board U.S. carriers by 50 percent over 18-year period — FY 2008–2025. Target for FY 2021 is 5.4.	AVS	0.1	0.5	0.6[1]	5.4	0.0[2]	✓
Commercial Surface Safety Risk Index Manage the weighted surface safety risk index at or below 0.35 per million airport operations for commercial aviation.	ATO	New Measure for FY 2019	0.105[4]	0.053	0.35	0.037[3]	✓
Non-Commercial Surface Safety Risk Index Manage the weighted surface safety risk index at or below 0.60 per million airport operations for non-commercial aviation.	ATO	New Measure for FY 2019	0.537[4]	0.204	0.6	0.146[3]	✓
Top 5 Corrective Action Plan Implementation Through Collaboration Across the Air Traffic Organization (ATO) Implement 85 percent of approved mitigation activities in association with ATO's Top 5 identified trending safety issues in the national airspace system.	ATO	89%	93%	86%	85%	87%	✓
General Aviation Fatal Accident Rate* Reduce the general aviation fatal accident rate to no more than 0.89 fatal accidents per 100,000 flight hours by 2028. FY 2021 Target: 0.96.	AVS	0.89	0.95	0.91[1]	0.96	0.73[2]	✓
Commercial Space Licensed and Permitted Launch and Reentry Safety Ensure there are no fatalities, serious injuries, or significant property damage to the uninvolved public during licensed or permitted space launch and reentry activities.	AST	0	0	0	0	0	✓
National On-Airport Policy, Processes, and Procedures for Unmanned Aircraft Systems (UAS) FAA is working to enable the national use of UAS on and/or near airports for a variety of mission types.	ATO	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet all five targets	Met all five targets	✓
Unmanned Aircraft Systems Remote Identification (ID) Outreach and Engagement Facilitate early adoption of Remote ID technology by conducting six enterprise-level outreach and engagement activities.	AVS	Updated Measure for FY 2021	Updated Measure for FY 2021	Updated Measure for FY 2021	Conduct six activities	Accomplished six activities	✓

* This performance measure supports a DOT Agency Priority Goal.

✓ Target met ✗ Target not met

1 Preliminary estimate until final results are available in December 2021. We do not expect any change in the result to be significant enough to alter our year-end status of achieving the target.

2 Preliminary estimate until final results are available in December 2022. We do not expect any change in the result to be significant enough to alter our year-end status of achieving the target.

3 Preliminary estimate until the final result becomes available in March 2022. We do not expect any change in the final result to be significant enough to alter our year-end status of achieving the target.

4 Metric revised to reflect data stream enhancements to reflect the most current and accurate information possible.

PEOPLE

Strengthen our current and future aviation workforce by holding ourselves accountable, developing our people and planning for the aviation workforce of the future.

Performance Measure	Org.	FY 2018 Results	FY 2019 Results	FY 2020 Results	FY 2021 Target	FY 2021 Results	FY 2021 Status
FAA Corporate Diversity and Inclusion Strategic Plan Develop and design a Five-Year Diversity and Inclusion Strategic Plan that will provide relevant, strategies, goals, and tools needed to create an inclusive, discrimination-free workplace where all employees will have the opportunity to reach their full potential.	ACR/ AHR	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet two targets	Met two targets	✓
FAA National Science, Technology, Engineering, and Math (STEM) Aviation and Space Education (AVSED) Program Governance Structure Fully implement the cross-agency STEM AVSED governance structure, to include the STEM AVSED Executive Board, and the STEM AVSED Steering Committee.	APL	Updated Measure for FY 2021	Updated Measure for FY 2021	Updated Measure for FY 2021	Meet all three targets	Met three targets	✓

✓ Target met ✗ Target not met

GLOBAL LEADERSHIP

Advance global aviation safety, operational excellence, and innovation by leading and collaborating with aviation authorities globally.

Performance Measure	Org.	FY 2018 Results	FY 2019 Results	FY 2020 Results	FY 2021 Target	FY 2021 Results	FY 2021 Status
Implement FAA International Strategy and Enhance International Civil Aviation Organization (ICAO) Work Contribute to the development of the U.S. government position regarding the ICAO Secretary General Election in March 2021 and qualified U.S. citizens for ICAO's senior technical and regional positions in order to have a direct and continuous influence at the U.N. technical agency.	APL	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet all three targets	Met three targets	✓
Promote International Safety and U.S. Interests Influence the development of international approaches to ensure the safe and sustainable recovery of the aviation sector after the global health emergency.	APL	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet two targets	Met two targets	✓

✓ Target met ✗ Target not met

OPERATIONAL EXCELLENCE

Operate the world's most efficient aerospace system through daily execution, continuous improvement, and infrastructure investment.

Performance Measure	Org.	FY 2018 Results	FY 2019 Results	FY 2020 Results	FY 2021 Target	FY 2021 Results	FY 2021 Status
Major System Investments Ninety percent of major baselined acquisition programs must be maintained within ten percent of their current acquisition cost, schedule and performance baseline as of the end of FY 2021.	AFN	90.5%	75%	65%	90%	90.9%	✓
Unmodified Audit Opinion Obtain an unmodified audit opinion on the FAA's FY 2021 financial statements identified by external independent auditors.	AFN	Unmodified audit opinion w/no material weakness	Unmodified audit opinion w/no material weakness	Unmodified audit opinion	Unmodified audit opinion	Unmodified audit opinion	✓
Community Engagement Develop informational tools on FAA's efforts to safely and efficiently integrate new entrant vehicles to the national airspace, including Unmanned Aircraft Systems (UAS), Urban Air Mobility, and Commercial Space operations.	ATO	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet two targets	Met two targets	✓
Environmental Efficiency and Emissions Continue FAA leadership in improving environmental efficiency and addressing carbon emissions from aviation through domestic implementation of International Civil Aviation Organization (ICAO) airplane carbon dioxide standard and continued domestic implementation of the Carbon Offsetting and Reduction Scheme for International Aviation.	APL	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Submit data to ICAO	Data submitted	✓
NextGen Advisory Committee Commitments Achieve 80 percent of NextGen Advisory Committee NextGen Priorities Joint Implementation Plan commitments, excluding industry-controlled milestones, within a calendar quarter of their scheduled dates and within 10 percent of the planned cost.	ANG	91.3%	97.5%	100%	80%	100%	✓
Return of our aviation system post COVID impacts Sustain and improve critical FAA cross-cutting support functions in response to a global pandemic.	ASH	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet all three targets	Met three targets	✓
Address 80 percent of Internet Accessible High-Value Assets with Critical and High Vulnerabilities Address 80 percent of the FAA's Internet accessible high value assets with critical and high vulnerabilities in accordance with Department of Homeland Security's Binding Operational Directive 19-02. Provide monthly updates to the Cybersecurity Steering Committee.	AFN	Updated Measure for FY 2021	Updated Measure for FY 2021	Updated Measure for FY 2021	80%	100%	✓
Integrate Commercial Space Transportation into the National Airspace System* Develop and implement Time-Based Launch/Reentry Procedures and Dynamic Launch and Reentry Windows for integrating complex commercial space launch and reentry operations into the national airspace system.	ATO	New Measure for FY 2020	New Measure for FY 2020	Developed two procedures	Implement procedures at two sites	Procedures implemented at two sites	✓

* This performance measure supports a DOT Agency Priority Goal.

✓ Target met ✗ Target not met

Alignment of FAA Costs and Strategic Goals

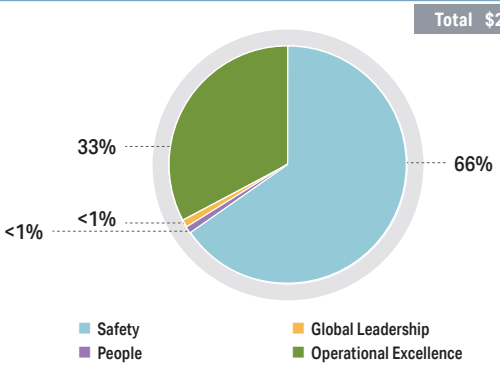
The FAA uses a cost accounting system to track and summarize costs by organizational unit and project. This enables the FAA to evaluate whether its spending is in alignment with the agency's four strategic goals. At the beginning of each project, the FAA determines the degree to which the project will contribute to one or more of the strategic goals. The FAA then allocates actual project costs to the strategic goals that are supported by the project. Because the FAA also routinely accumulates costs by organizational unit, it is then able to assign total net costs among its five lines of business and the combined staff offices, by strategic goal.

The FAA's total net cost of $25.7 billion was allocated to its four strategic goals, as described below and as shown in the *Net Cost by Strategic Goal* chart on this page, and in Note 14 of the financial statements.

Safety. A little over $16.9 billion, or approximately 66 percent of total net cost, was devoted to further enhance the outstanding safety record of the nation's airspace.

- The Air Traffic Organization (ATO) spent approximately $10.5 billion, largely to maintain the safe separation of aircraft in the air and on the ground.
- The Office of Airports (ARP) provided approximately $4.6 billion for projects to preserve or enhance safety. Of the $4.6 billion, airport grant costs from COVID-19 funds amounted to approximately $3.2 billion.
- The Aviation Safety (AVS) Organization spent just under $1.7 billion on its programs to regulate and certify aircraft, pilots, and airlines, directly supporting the safety of commercial and general aviation.
- The Office of Security and Hazardous Materials Safety (ASH) spent approximately $121 million on its programs to ensure critical infrastructure protection, emergency operations, contingency planning, and the safe transportation of hazardous materials in air commerce.
- The Office of Commercial Space Transportation (AST) spent a little under $26 million in support of the agency's safety goal.
- Collectively, the FAA staff offices and other programs spent about $71 million to further support the agency's safety goal which was offset by revenues of $104 million primarily from overflight user fees, along with revenues from reimbursable agreements.

NET COST BY STRATEGIC GOAL
as of September 30, 2021
(Dollars in Thousands)



People. As a whole, the FAA committed approximately $147 million to strengthen the agency's ability to fulfill its safety, operational excellence, and global leadership missions through a highly diverse, engaged, and skilled workforce.

Global Leadership. Approximately $39 million was used to help the U.S. reassert its global influence in aviation safety and leadership reputation around the globe by becoming the gold standard in safety again.

Operational Excellence. A little over $8.6 billion, or about 33 percent of total net costs, was assigned to invest in better technologies that enable efficiencies, while concurrently sustaining the existing infrastructure of the national airspace system.

- The ATO spent over $1.8 billion, largely to finance its facilities and equipment projects.
- ARP also provided approximately $6.6 billion to build or reconstruct core airfield infrastructure projects involving runways and taxiways, and sustain the operational excellence of US airports during the COVID-19 pandemic. Of the $6.6 billion, airport grant costs from COVID-19 funds amounted to approximately $4.0 billion.

PREPARING TO FLY?
Visit **https://www.faa.gov/travelers/prepare_fly/** before you get to the airport for travel tips, information on weather and delays, and resources for passengers with disabilities.

ALREADY AT THE AIRPORT?
Visit **m.faa.gov** from your mobile device for up-to-date information on airport status and delays, and the latest news from the FAA.

Financial Highlights

Discussion and Analysis of the Financial Statements

The FAA prepares annual financial statements in conformity with accounting principles generally accepted in the United States. The financial statements are subject to an independent audit to ensure that they are free from material misstatement and that they can be used to assess the FAA's performance.

FY 2021 Financial Statements Audit

The Chief Financial Officers Act of 1990 (Public Law 101–576), as amended by the Government Management Reform Act of 1994, requires that financial statements be prepared by certain agencies and commercial-like activities of the federal government and that the statements be audited in accordance with Generally Accepted Government Auditing Standards. The FAA is required to prepare its own financial statements under Office of Management and Budget (OMB) Bulletin No. 21-04, *Audit Requirements for Federal Financial Statements*. The Department of Transportation's (DOT) Office of Inspector General (OIG) is statutorily responsible for the manner in which the audit of the FAA's financial statements is conducted. The OIG selected KPMG LLP, an independent public accounting firm, to audit the FAA's FY 2021 financial statements.

KPMG LLP has rendered an unmodified audit opinion on the FAA's FY 2021 financial statements.

Understanding the Financial Statements

The FAA's Consolidated Balance Sheets, Statements of Net Cost, Changes in Net Position, and Combined Statements of Budgetary Resources have been prepared to report the financial position and results of operations of FAA, pursuant to the requirements of the Chief Financial Officers Act of 1990 and the Government Management Reform Act of 1994. The following section provides a brief description of (a) the nature of each financial statement and its relevance to FAA, (b) significant fluctuations from FY 2020 to FY 2021, and (c) certain significant balances, where necessary, to help clarify their link to the FAA's operations.

Financial Impact of COVID-19

The American Rescue Plan Act of 2021 (ARPA) provided an additional $8 billion in general fund appropriations for Relief for Airports to be allocated to sponsors of airports to prevent, prepare for and respond to coronavirus. Specifically, $6.6 billion can be used for operational expenses and debt service, $800 million can be used for rent and airport concessions, and the remaining $600 million can be used to fund up to 100% of the federal share of any airport development grant awarded in FY 2020 or FY 2021.

The Coronavirus Response and Relief Supplemental Appropriations Act, 2021 (CRRSA), provided an additional $2 billion in general fund appropriations for Grants-in-Aid for Airports to prevent, prepare for, and respond to COVID-19. Airport grants issued with CRRSA Act funds can be used for operational expenses and debt service.

The Coronavirus Aid, Relief, and Economic Security (CARES) Act in FY 2020 provided an additional $10 billion in general fund appropriations for Grants-in Aid for Airports to prevent, prepare for, and respond to the COVID-19 pandemic. The continuing grant activity from the CARES Act was significant in FY 2021. The CARES Act also suspended the collection of almost all aviation excise taxes for the third and fourth quarter of FY 2020 and the first quarter of FY 2021.

Due to the CARES Act suspension of the collection of almost all aviation excise taxes, the Continuing Appropriations Act, 2021 and Other Extensions Act (Public Law 116-159), included a $14 billion general fund transfer to the Airport and Airway Trust Fund (AATF) in order to shore up the AATF to ensure funding stability for federal aviation programs. This general fund transfer to the AATF is also referred to as a cash infusion.

The combined financial impact of ARPA, CRRSA, CARES and the $14 billion general fund transfer to AATF may create significant comparative differences between FY 2021 and FY 2020. These comparative differences will be discussed below as they are reflected in FAA's principal financial statements.

Balance Sheet

The balance sheet presents the amounts available for use by FAA (assets) against the amounts owed (liabilities) and amounts that comprise the difference (net position).

Assets

The FAA's assets are the resources available to pay liabilities or satisfy future service needs. The following table presents a comparison of key asset measures as of September 30, 2021 and 2020.

(Dollars in Thousands)	2021	Percent	2020	Percent	Increase/(Decrease)
ASSETS					
Fund balance with Treasury	$ 13,196,463	30	$ 10,995,645	32	$ 2,200,818
Investments, net	18,189,656	41	10,259,928	30	7,929,728
General property, plant and equipment, net	11,670,008	27	11,917,696	35	(247,688)
Other assets	948,135	2	947,881	3	254
Total assets	**$ 44,004,262**	**100**	**$ 34,121,150**	**100**	**$ 9,883,112**

Fund balance with Treasury represents 30 percent of the FAA's current period assets and consists of funding available through the Department of Treasury accounts from which the FAA is authorized to make expenditures to pay liabilities. It also includes passenger ticket and other excise taxes deposited to the Airport and Airway Trust Fund (AATF), but not yet invested. *Fund balance with Treasury* ended the year at $13.2 billion compared to $11.0 billion in 2020. The increase of $2.2 billion is primarily due to the $8.0 billion general fund appropriation for ARPA of which $7.7 billion remains and the $2.0 billion general fund appropriation for CRRSA of which $1.4 billion remains. The remaining funds from ARPA and CRRSA are offset by a comparative decrease in the remaining CARES Act funds of $4.3 billion and a comparative decrease of $1.7 billion in the AATF fund balance as of September 30, 2021 due to the excise tax certification adjustment for the tax period ending June 30, 2021. The COVID-19 funding from CARES, ARPA, and CRRSA has had a significant impact on the fund balance with Treasury and represents $11.6 billion of the FY 2021 ending balance. The COVID-19 funding remains a part of the fund balance with Treasury until grant recipients claim reimbursement for eligible costs incurred.

At $18.2 billion, *Investments* represent 41 percent of the FAA's current period assets, and are comprised of AATF investments and Aviation Insurance Program investments. The AATF investments are derived primarily from the collection of passenger ticket and other excise taxes deposited semi-monthly to the AATF. The deposited taxes are invested within several business days, thus transitioning the asset classification from fund balance with Treasury to investments. The AATF investment balances increased approximately $7.9 billion on a comparative basis. The increase was principally the result of the $14.0 billion cash infusion from the general fund, mentioned earlier, offset by a net decrease of $6.0 billion between excise tax collections and interest earned of $10.2 billion against the $16.2 billion of drawdowns to cover current period disbursements.

The investment balances also include the Aviation Insurance Program investments. These investments are redeemed, as needed, to finance the FAA's daily operations to the extent authorized by the U.S. Congress, and to pay potential insurance claims. The Aviation Insurance Program investment balance decreased by $84.4 million to $2.2 billion due to a security that matured and was not yet reinvested as of September 30, 2021.

At $11.7 billion, *General property, plant, and equipment, net* (PP&E) represents 27 percent of the FAA's assets as of September 30, 2021, and primarily comprises construction in progress related to the development of the national airspace system assets, and capitalized real and personal property. There was a decrease of $248 million in the total composition of PP&E, as retirements, disposals, and depreciation exceeded purchases of equipment and additions to construction in progress through the normal course of business.

Liabilities

Liabilities are probable and measurable future outflows of resources arising from past transactions or events. The following table presents a comparison of key liability measures as of September 30, 2021 and 2020.

(Dollars in Thousands)	2021	Percent	2020	Percent	Increase/(Decrease)
LIABILITIES					
Accrued grant liabilities	$ 7,230,444	67	$ 5,161,060	59	$ 2,069,384
Federal employee benefits payable	1,328,131	12	1,343,644	15	(15,513)
Environmental and disposal liabilities	752,148	7	745,540	8	6,608
Accounts payable	451,630	4	440,076	5	11,554
Other liabilities	1,120,505	10	1,120,687	13	(182)
Total liabilities	**$ 10,882,858**	**100**	**$ 8,811,007**	**100**	**$ 2,071,851**

The FAA's *accrued grant liabilities* are estimated amounts incurred, but not yet claimed, by Airport Improvement Program grant recipients and represent 67 percent of liabilities. *Accrued grant liabilities* increased significantly by $2.1 billion to $7.2 billion as of September 30, 2021. The increase is primarily comprised of year-end grants payable accruals totaling $6.4 billion for ARPA, CRRSA, and the CARES Act grants compared to $4.3 billion for the CARES Act grants alone in FY 2020. The accrued grants payable liability for the existing non-COVID-19 related grants programs basically remained constant year over year.

At $1.3 billion, *Federal employee benefits payable* represent 12 percent of the FAA's current year liabilities, and consist of the FAA's expected liability for death, disability, and medical costs for approved workers' compensation cases, plus a component for incurred but not reported claims. The Department of Labor calculates the liability for the DOT, and the DOT attributes a proportionate amount to the FAA based upon actual workers' compensation payments to FAA employees over the preceding four years. This liability is updated on an annual basis at year end.

Environmental and disposal liabilities represent 7 percent of the FAA's total liabilities and increased slightly by $6 million to $752 million as of September 30, 2021 compared with $746 million a year earlier. *Environmental and disposal liabilities* include a component for remediation of known contaminated sites that increased by $12 million on a comparative basis. The other component of environmental liabilities includes the estimated costs for future facility decommissioning. This component's costs decreased by a total of $6 million on a comparative basis.

Accounts payable represents 4 percent of liabilities and increased slightly by $12 million. Accounts payable are the amounts the FAA owes to other entities for unpaid goods and services received.

At $ 1.1 billion, *Other liabilities* represent 10 percent of the FAA's total liabilities. These liabilities remained constant year over year and are comprised mainly of $359 million in advances from others and deferred revenue, $147 million in Federal Employee's Compensation Act payable, $118 million in accrued payroll and benefits, $337 million in accrued leave and benefits, $52 million in legal claims liability, and $45 million in capital lease liability.

Statement of Net Cost

The Statement of Net Cost presents the cost of operating the FAA's programs. The gross expense, less any earned revenue, represents the net cost of specific program operations. The FAA has used its cost accounting system to prepare the annual Statement of Net Cost since FY 1999. In contrast to the budgetary basis of accounting applicable to the Statement of Budgetary Resources discussed in Note 1C (page 103), balances reported on the Statement of Net Cost are reported on an accrual accounting basis. Under the accrual method, revenues are recognized when earned, and expenses are recognized when a liability is incurred.

The following table presents a comparison of FAA's net costs by line of business for the years ended September 30, 2021 and 2020.

(Dollars in Thousands)	2021	Percent	2020	Percent	Increase/(Decrease)
NET COSTS					
Air Traffic Organization	$ 12,459,208	48	$ 12,078,641	48	$ 380,567
Airports	11,225,978	44	11,300,066	45	(74,088)
Aviation Safety	1,730,971	7	1,610,340	6	120,631
Security and Hazardous Materials Safety	134,149	< 1	93,526	< 1	40,623
Commercial Space Transportation	34,186	< 1	28,322	< 1	5,864
Non-line of business programs	137,639	< 1	78,322	< 1	59,317
Total net cost	**$ 25,722,131**	**100**	**$ 25,189,217**	**100**	**$ 532,914**

With a net cost of $12.5 billion, the *Air Traffic Organization* is the FAA's largest line of business, comprising 48 percent of total net costs. The Air Traffic Organization's net costs increased by $381 million, on a comparative basis, primarily from increases in costs for contractor services, labor, and employee benefits offset by a decrease in equipment and transportation costs.

The *Airports* line of business net cost decreased slightly from $11.3 billion to $11.2 billion for the fiscal year ended September 30, 2021, and represents 44 percent of the FAA's total net costs. Airports net costs are comprised primarily of Stewardship Investments from the Airport Improvement Program. The Stewardship Investments are made through grants to airport authorities, local and state governments, and metropolitan planning authorities for airport facilities throughout the United States and its territories. In FY 2021, the combined grant expenses for all grant activity including CARES, CRRSA, and ARPA, accounted for 92 percent of the *Airports* net cost decrease from FY 2020 on a comparative basis.

At $1.7 billion, the net cost for *Aviation Safety* represents 7 percent of the FAA's total net costs, while *Security and Hazardous Materials Safety*, *Commercial Space Transportation*, and *non-line of business programs* each represent less than 1 percent of total net costs.

Statement of Changes in Net Position

The *Statement of Changes in Net Position* presents those accounting items that caused the net position section of the balance sheet to change from the beginning to the end of the reporting period. Various financing sources increase net position. These financing sources include appropriations received and non-exchange revenue, such as excise taxes and imputed financing from costs paid on the FAA's behalf by other federal agencies. The agency's net cost of operations and net transfers to other federal agencies serve to reduce net position.

The following table presents a comparison of key measures of net position for the years ended September 30, 2021 and 2020.

(Dollars in Thousands)	2021	2020	Percent Change	Increase/(Decrease)
CHANGES IN NET POSITION				
Unexpended appropriations, ending	$ 5,555,123	$ 432,928	1183	$ 5,122,195
Cumulative results of operations, ending	27,566,281	24,877,215	11	2,689,066
Net position	**$ 33,121,404**	**$ 25,310,143**	**31**	**$ 7,811,261**

Unexpended appropriations increased from $433 million to $5.6 billion. The $5.1 billion increase is comprised mostly from appropriations received of $24.9 billion offset by appropriations used of $19.7 billion. The appropriations received are primarily comprised of general fund appropriations of $14.0 billion from the AATF cash infusion, $8.0 billion from ARPA, and $2.0 billion from CRRSA. The appropriations used are primarily comprised of the cash infusion into the AATF of $14.0 billion and the $2.0 billion from CRRSA, both of which are required to be transferred from the general fund account to the trust fund account resulting in appropriations used at the time of the transfer. Additionally, there was $3.2 billion of appropriations used from ARPA. The general fund appropriation from ARPA did not require a transfer to the trust fund.

The *Net Change* in FAA's *Cumulative Results of Operations* for the fiscal year ended September 30, 2021, was an increase of $2.7 billion from $24.9 billion to $27.6 billion. The $2.7 billion increase is comprised primarily of $19.7 billion in appropriations used and $8.5 billion in non-exchange revenue offset by a net cost of $25.7 billion. The appropriations used are discussed above in *Unexpended appropriations*. The non-exchange revenue is almost entirely from the aviation excise tax collections and interest earned on AATF investments.

Statement of Budgetary Resources

The Statement of Budgetary Resources provides information on the budgetary resources available to the FAA and the status of those budgetary resources. The following table presents a comparison of key budgetary resource measures for the years ended September 30, 2021 and 2020.

(Dollars in Thousands)	2021	2020	Percent Change	Increase/(Decrease)
BUDGETARY RESOURCES				
Total budgetary resources	$ 62,380,658	$ 55,793,608	12	$ 6,587,050
New obligations and upward adjustments	$ 52,810,501	$ 49,437,939	7	$ 3,372,562
Agency outlays, net	$ 23,003,059	$ 20,351,738	13	$ 2,651,321

The FAA's *Total budgetary resources* consist of new budget authority and unobligated balances of budget authority provided in previous years. New budget authority consists of the enacted budget, as well as other funding sources made available which are not provided through the enactment of annual appropriations. This also includes expenditure transfers of resources between federal fund types, which reflect the resources in both the enacted account and the program account to which they are transferred. *Total budgetary resources* for the fiscal year ended September 30, 2021 were $62.4 billion, of which $55.6 billion of new budget authority comes from appropriations, contract authority, and offsetting collections. The appropriations of $41.0 billion include the annual funding for Operations, Facilities and Equipment, Research, Engineering and Development and Grants-in-Aid to Airports totaling $14.6 billion. There are additional supplemental appropriations of $14.0 billion for a cash infusion to shore up the AATF due to the excise tax holiday included in last year's CARES Act, $8 billion from ARPA, $2 billion from CRRSA, and $2.4 billion of appropriated receipts resulting from financial transfers between general and trust funds. Contract authority remained constant at $3.4 billion while spending authority from offsetting collections slightly decreased to $11.2 billion.

Total budgetary resources for the fiscal year ended September 30, 2020, were $55.8 billion, of which $49.3 billion of new budget authority comes from appropriations, contract authority, and offsetting collections. The appropriations of $34.7 billion include the annual funding for Operations, Facilities and Equipment, Research, Engineering and Development and Grants-in-Aid to Airports totaling $14.3 billion. There was an additional supplemental appropriation of $10.0 billion for the CARES Act and $10.4 billion of appropriated receipts resulting from financial transfers between general funds and trust funds. Contract authority was $3.4 billion while offsetting collections were $11.3 billion.

New obligations and upward adjustments result from an order placed, contract awarded, service received, or similar transaction, which will require payments during the same or a future period. *New obligations and upward adjustments* increased $3.4 billion from $49.4 billion to $52.8 billion. The increase is mainly from new obligations from the AATF cash infusion, ARPA, and CRRSA of $21.2 billion, of which $16.0 billion is the result of expenditure transfers between FAA funds, and a comparative increase of approximately $1.0 billion from recurring programs. The increases are offset by an $18.9 billion comparative decrease in CARES Act obligations. The CARES Act obligations were $19.4 billion in FY 2020, of which $10.0 billion is the result of expenditure transfers between FAA funds, compared to new obligations of $512 million in FY 2021 which accounts for the large variance.

Net outlays reflect the actual cash disbursed by the Treasury for the FAA's obligations net of offsetting collections. *Net outlays*, net of distributed offsetting receipts, increased by $2.6 billion from $ 20.4 to $23.0 billion. The increase is primarily comprised of net outlays from the AATF cash infusion, CRRSA, and ARPA of $16.9 billion and an increase of $449 million in recurring programs offset by a comparative decrease of $8.8 billion from the CARES Act which amounts to a comparative increase in net outlays of $8.5 billion. The distributed offsetting receipts including the AATF cash infusion, CRRSA, and CARES increased by $6.0 billion. The increase in net outlays of $8.5 billion reduced by the increase in distributed offsetting receipts of $6.0 billion accounts for $2.5 billion of the year over year increase of $2.6 billion.

Expenditure Transfers between FAA Accounts

Budgetary concepts require that appropriations derived from the Airport and Airway Trust Fund for a general fund program be transferred through an intermediary trust fund program account. The appropriated amount is transferred, as needed to fund current period disbursements, from the Airport and Airway Trust Fund to a trust fund program account, then transferred from the trust fund program account to the general fund program account.

The following is an illustrative example that shows the effect of these transfers on budgetary resources.

(Dollars in Thousands)	Trust Fund Account	General Fund Account
Appropriations	$ 10,519,000	$ –
Spending authority from offsetting collections	–	10,519,000
Total budgetary resources	$ 10,519,000	$ 10,519,000
New obligations and upward adjustments		
Expenditure transfers - paid	$ 9,500,000	$ –
Expenditure transfers - payable	1,019,000	–
Apportioned, unexpired account	–	10,519,000
Total budgetary resources	$ 10,519,000	$ 10,519,000
Outlays, net		
Expenditure transfers - paid	$ 9,500,000	$ –
Expenditure transfers - collected	–	(9,500,000)
Agency outlays, net	$ 9,500,000	$ (9,500,000)

Similarly, budgetary concepts require that general fund appropriations for trust fund programs be deposited to a general fund payment account, apportioned, then transferred to an available trust fund receipt account, fully expending the appropriation. The transfer-in to the available trust fund receipt account is then recorded as an appropriated receipt, apportioned, and available for obligation.

The following is an illustrative example that shows the effect of these transfers on budgetary resources.

(Dollars in Thousands)	General Fund Account	Trust Fund Account
Appropriations		
General fund appropriations realized	$ 16,400,000	$ –
Appropriated receipts	–	16,400,000
Total budgetary resources	$ 16,400,000	$ 16,400,000
New obligations and upward adjustments		
Expenditure transfer	$ 16,400,000	$ –
Apportioned, unexpired account	–	16,400,000
Total budgetary resources	$ 16,400,000	$ 16,400,000
Outlays, net	$ 16,400,000	$ –
Distributed offsetting receipts	–	(16,400,000)
Agency outlays, net	$ 16,400,000	$ (16,400,000)

Other Matters

Climate Change Risks

Environmental impacts, such as that resulting from climate change, can have potentially profound impacts on the assets and infrastructure supporting the nation's airspace system. An example of FAA's efforts to assess and measure the risk to national airspace assets resulting from category 1-4 hurricanes includes a study of 14 areas in the northeastern United States, finding that 12 are at risk of water inundation. While the Northeast has historically experienced less frequent hurricane activity than the Southeast and Gulf Coast, hurricanes may also increase in severity due to climate change.

Climate change can also have potentially profound impacts on airports. The FAA recognizes, for example, that it may need to make investments for airports exposed to flooding and melting permafrost ground. Runways, taxiways, aprons, and other airport infrastructure may need to be rebuilt, replaced, or relocated. As temperatures rise, aircraft need longer runways to safely takeoff. There is also potential for climate-driven changes to wildlife habitats and migratory patterns around airports. The FAA continues to assess these risks and is working with airports to address and mitigate these risks through infrastructure grants.

While climate change presents some degree of risk to FAA's assets, program costs, and financial position, such matters are not reflected in the FAA's financial statements because they do not meet the accounting standards for recognition of liabilities.

Limitations of the Financial Statements

The principal financial statements are prepared to report the financial position, financial condition, and results of operations, pursuant to the requirements of 31 U.S.C. 3515(b). The statements are prepared from records of Federal entities in accordance with Federal generally accepted accounting principles (GAAP) and the formats prescribed by OMB. Reports used to monitor and control budgetary resources are prepared from the same records. Users of the statements are advised that the statements are for a component of the U.S. Government.

Budgetary Integrity: FAA Resources and How They Are Used

The following discussion of FAA's Resources and How They Are Used is graphically shown on page 33. The FAA receives budget authority to obligate and expend funds from both the General Fund of the U.S. Treasury and the Airport and Airway Trust Fund (AATF). Created by the Airport and Airway Revenue Act of 1970, the AATF pays for investments in the airport and airway system and a majority of the FAA's operating costs. Aviation excise taxes, which include taxes on domestic passenger tickets, freight way bills, general and commercial aviation fuel, and international departures and arrivals, are deposited into the AATF. The Department of the Treasury, which administers the AATF, invests those funds in government securities. Interest earned is also deposited into the AATF. Funds are withdrawn from the AATF as needed to meet cash disbursement needs.

The unparalleled drop in aviation activity in 2020 and the temporary suspension of aviation-related excise taxes resulted in greatly decreased revenues flowing into the AATF last year. To address this challenge, on October 1, 2020, the U.S. Congress appropriated a one-time infusion of $14 billion into the AATF. This appropriation allowed the trust fund to continue supporting the FAA's budget in FY 2021.

In FY 2021, the AATF paid for approximately 95 percent of the FAA's enacted budget authority provided in the Consolidated Appropriations Act, 2021 (Public Law 116-260), with the remaining funds coming from the General Fund of the U.S. Treasury. In addition to the funding provided in the Act for the FAA's annual budget, the FAA received supplemental funds from the Coronavirus Response and Relief Supplemental Appropriations Act, 2021 (CRRSA), which was included in the same public law as the Consolidated Appropriations Act, 2021, as well as the American Rescue Plan Act of 2021 (ARPA) (Public Law 117-2), which the U.S. Congress enacted in March 2021. CRRSA provided the FAA an additional $2 billion and ARPA provided another $8 billion from the General Fund to help the nation's airports contend with the financial impacts of COVID-19. ARPA also provided $9 million from the General Fund to allow FAA employees to take paid leave for COVID-19-related reasons. While these supplemental appropriations increased the total amount of funding provided to the FAA, they reduced the AATF share of the FAA's total budget to 61 percent for FY 2021.

The FY 2021 enacted budget of $27.97 billion was an increase of $354 million (1.3 percent) from the FY 2020 enacted level, which also included $10 billion in supplemental appropriations from the General Fund for COVID-19 relief. Absent the supplemental funding from both fiscal years, the FY 2021 FAA budget was an increase of $345 million (2.0 percent) over the FY 2020 enacted level.

The FAA requests and receives its funding in four primary accounts:

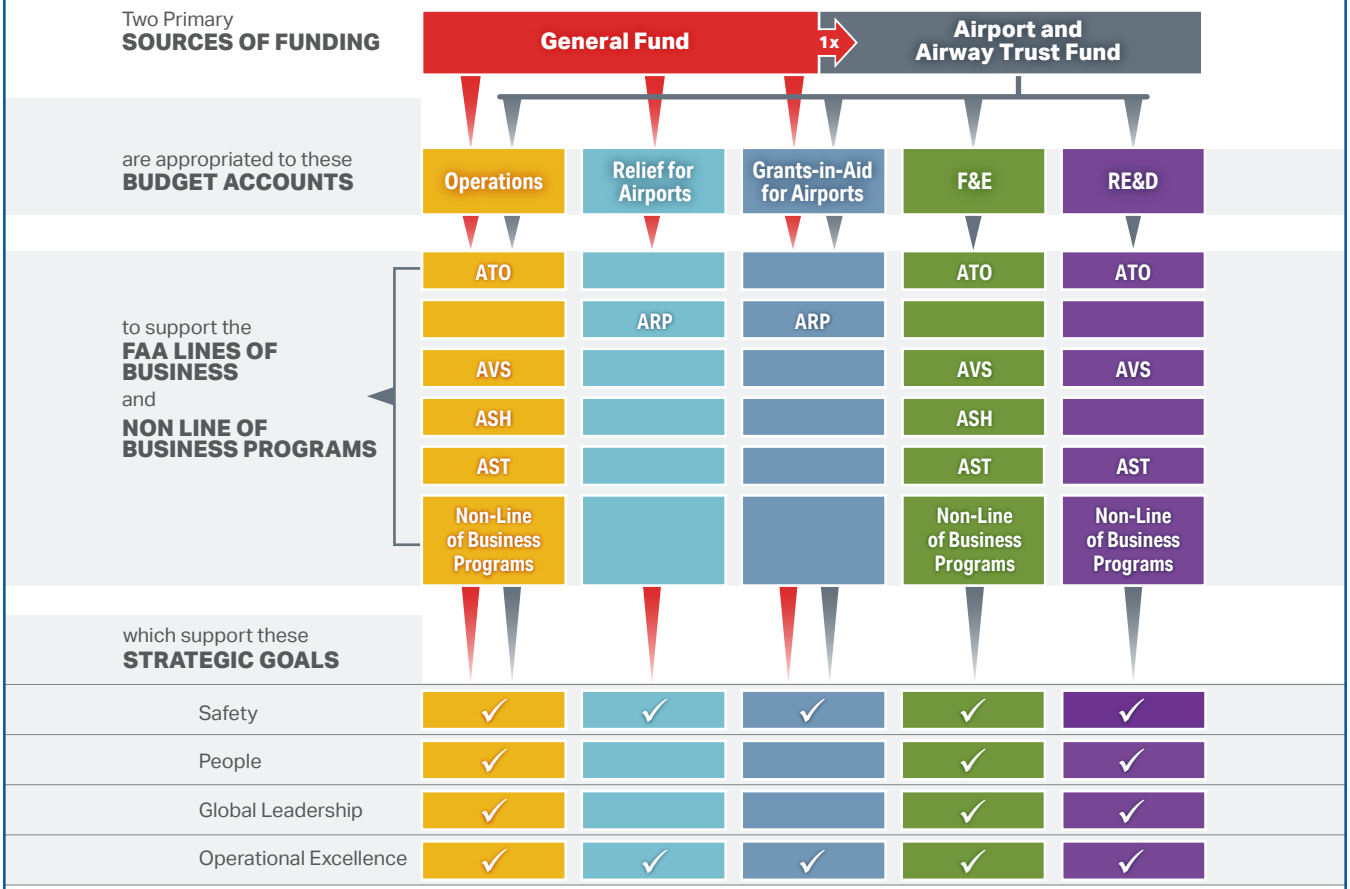
- **Operations**
- **Grants-in-Aid for Airports**
- **Facilities and Equipment (F&E)**
- **Research, Engineering, and Development (RE&D)**

The largest account, Operations, is supported by both the General Fund and the AATF. In FY 2021, the AATF supported 96 percent of the funding for the Operations account. In most previous years, the AATF supported 100 percent of the funding for the three other accounts—Grants-in-Aid for Airports, F&E, and RE&D. Since FY 2018, however, the Grants-in-Aid for Airports account has received funding from both the AATF and the General Fund. Due to the large supplemental appropriation for COVID-19, the AATF provided 58 percent of the total funding for the Grants-in-Aid for Airports account in FY 2021.

In addition to these longstanding accounts, in FY 2021 the FAA established two new budget accounts—Relief for Airports for the airport funding provided in ARPA, and the Emergency Leave Fund for funding provided in ARPA to cover paid leave for COVID-19-related needs. As mentioned above, the funding in both of these accounts is supported by the General Fund. The following information provides further details on the FAA's budget accounts (with the exception of the Emergency Leave Fund, which includes only $9 million in FY 2021).

Operations. This account finances operating costs, maintenance, communications, and logistical support for the air traffic control and air navigation systems. It also funds the salaries and costs associated with safety inspections and regulatory responsibilities. In addition, the account covers administrative and managerial costs for international, medical, engineering, and development programs, as well as for policy oversight and overall management functions. For FY 2021, the Operations account received $10.5 billion from the AATF and $0.5 billion from the General Fund. This funding level is 3.6 percent greater than the FY 2020 level.

FAA Resources and How They Are Used



This chart aligns with the presentation of the FAA's audited Consolidated Statements of Net Cost on page 99 and Net Cost by Program and Strategic Goal in Note 14 on page 124. The columns represent each of the FAA's budget accounts in FY 2021, with the exception of the Emergency Leave Fund, which includes only $9 million in FY 2021. The chart also shows a one-time infusion of funding from the General Fund into the Airport and Airway Trust Fund (refer to pages 27, 29, 30, and 32 for more information). Net costs are presented among FAA's five lines of business and collectively for its non-line of business programs. General and administrative costs from the FAA's staff offices are allocated to the lines of business they support, on a reasonable and consistent basis. For more information, also see discussion of funding sources on pages 32–34 and the FAA's lines of business and staff offices on pages 10–11.

In FY 2021, the Grants-in-Aid for Airports account received an additional $2 billion from the General Fund for COVID-19-related supplemental funding.

In addition to the primary funding types listed above, the FAA also receives budgetary resources from revolving funds and user fees that are not graphically illustrated. For additional information on these funding sources, refer to page 34.

Grants-in-Aid for Airports. This account funds the Airport Improvement Program (AIP), through which the FAA awards grants for airport planning and development to maintain a safe and efficient nationwide system of public airports. These grants normally fund approximately one-third of all capital development at the nation's public-use airports. The FAA issues grants to maintain and enhance airport safety, preserve existing infrastructure, and expand capacity and efficiency throughout the system. The account also funds airport-related research and the administrative costs of the FAA's Office of Airports. FY 2021 funding for the account was $3.75 billion, with $400 million of that total coming from the General Fund. This funding is unchanged from the FY 2020 levels. In addition, the account received $2 billion from the General Fund from CRRSA in FY 2021. When combined with the $8 billion provided from ARPA in the Relief for Airports account, this funding is equal to the level provided from the General Fund in FY 2020 for COVID-19 airports grants.

F&E. This account funds the capital improvement projects necessary to establish, replace, relocate, or improve air navigation facilities and equipment and aviation safety systems across the national airspace system, particularly through programs supporting NextGen. F&E received $3.015 billion

from the AATF in FY 2021, a decrease of 1 percent from the FY 2020 level.

RE&D. This account funds research, engineering, and development programs to plan, conduct, and integrate domestic and international research efforts, and develop products and services that will ensure a safe, efficient, and more environmentally-conscious global air transportation system. The RE&D account received $198 million from the AATF in FY 2021, an increase of about 2.8 percent above the FY 2020 level.

Relief for Airports. The FAA established this account in FY 2021 for the $8 billion provided in ARPA from the General Fund to help the nation's airports contend with the financial impacts of COVID-19. When combined with the $2 billion provided from CRRSA in the Grants-in-Aid for Airports account (also in FY 2021), this funding is equal to the level provided from the General Fund in FY 2020 for COVID-19 airports grants.

The FAA must use its funds in the way they are appropriated. On its own, the FAA does not possess the legal authority to move funds between these accounts. A transfer between accounts requires an act of the U.S. Congress.

Other Budgetary Resources. In addition to the primary funding resources appropriated by the U.S. Congress, the FAA also receives budgetary resources from revolving funds and user fees. Revolving funds are accounts established by law to finance a continuing cycle of operations with receipts derived from such operations. These funds are usually available in their entirety for their intended use without further action by the U.S. Congress. User fees are specific charges for the purchase or use of government goods or services. The "other funds" described next are not part of the enacted budget, but do provide another source of budgetary resources.

Aviation Insurance Revolving Fund. The Aviation Insurance Revolving Fund provides non-premium war risk insurance, which includes hull loss and passenger, crew, and third-party liability coverage, for certain U.S. government-contracted air carrier operations, as authorized by 49 U.S.C. 44305. This non-premium insurance authority is authorized through September 30, 2023.

Administrative Services Franchise Fund (Franchise Fund). The Franchise Fund is a revolving fund designed to create competition within the public sector in the performance of a wide variety of support services. These services include accounting, travel, multi-media, information technology, logistics and material management, aircraft maintenance, international training, and management training.

Aviation Overflight User Fees. Aviation Overflight User Fees is a fund whose receipts come from charges to operators of aircraft that fly in U.S.-controlled airspace, but neither take off nor land in the United States. Under current law, the receipts are transferred to the Office of the Secretary of Transportation and used to support air service at certain locations under the Essential Air Service program.

Passengers walking through the terminal in Orlando, Florida. Photo by Khairil A Junos/Bigstock Images.

CROSS CHECK YOUR KNOWLEDGE

Keeping it 'CLEEN'

Aviation has made tremendous environmental performance gains, largely from advances in technologies that are helping to make air transportation cleaner, quieter, and more efficient. So what's next on the horizon?

The FAA is working on technological, operational, and policy solutions to reduce the environmental impacts of aviation. In partnership with industry, the FAA's Continuous Lower Energy, Emissions, and Noise (CLEEN) Program is developing certifiable aircraft and engine technologies that reduce noise, produce fewer emissions, and use less fuel. The CLEEN Program, initiated in 2010, has goals for fuel burn, emissions, and noise reduction tied to environmental standards that aircraft and engines are required to meet as a part of their airworthiness certification.

Through the CLEEN Program, the FAA shares the cost of accelerating development of these environmentally beneficial technologies with industry. Phase I of the CLEEN Program (2010 to 2015) funded several technologies that are in service today, including General Electric's low emissions twin-annular pre-mixing swirler combustors, which help reduce nitrogen oxides and non-volatile particulate matter emissions. Phase II of the CLEEN Program began in 2015, supporting an increased range of engine and aircraft technologies and alternative fuel projects. Some of these projects are ongoing and have an expected date of entry into commercial service by 2026.

Expanding on CLEEN Phases I and II, the third phase of the Program, which launched this year and runs through 2026, includes new goals for reducing community noise exposure, which complements the long-standing CLEEN goal to develop and demonstrate certifiable aircraft technologies that reduce noise levels. It also has a new goal to reduce aircraft engine particulate matter emissions (including soot) to complement the long-standing goal of reducing nitrogen oxide emissions. Whereas the first two phases of the CLEEN Program focused on subsonic (slower than the speed of sound) technologies, Phase III is open to technologies for both subsonic and supersonic (greater than the speed of sound) aircraft. Technologies developed under CLEEN Phase III are expected to be on a path for entry into service by 2031.

In addition to direct product applications, the knowledge gained from the development of these aircraft technologies is leading to improved design codes and fabrication methods that are being applied throughout these companies' product lines and leading to improved environmental performance across the industry.

For more information and to see the quantitative goals of the CLEEN program, visit the program website, here: *https://www.faa.gov/about/office_org/headquarters_offices/apl/research/aircraft_technology/cleen/*.

MIKE MONRONEY AERONAUTICAL CENTER

In 2021, the **Mike Monroney Aeronautical Center (MMAC)** marked its 75th anniversary under arguably the most challenging conditions faced in their 75-year history. In response to the pandemic, approximately 4,000 of the 6,000 MMAC employees were in full-time telework status, with 2,000 employees working on-site to support mission-critical operations. Despite the challenges and restrictions associated with the COVID-19 pandemic, MMAC continued to carry out activities to support a diverse customer base, including over 30 federal agencies in addition to the FAA. The MMAC delivers unique agency functions including, but not limited to: technical training; centralized supply chain management and field site services such as maintenance, repair, overhaul, and distribution; financial management shared services and information technology support across government; aviation medical and human factors research; and registration of the nation's civil aircraft and certification of airmen. Continuation of safe on-site mission critical services, as well as implementing maximum telework across much of the mission, was an unprecedented challenge that the MMAC team successfully met. Notable FY 2021 accomplishments include:

- Achieved $44 million in cost savings and avoidance by implementing streamlined processes, renegotiating contracts, implementing process automation, optimizing utilities, and improving workforce management.
- ISO-9001 re-certification audit—achieved level 5 (maturity level) for management control, Best-in-Class across industry.
- **MMAC Facility Management** provided facility-related services and maintenance for MMAC's 137 buildings and 3.4 million square feet of industrial, administrative, and laboratory space. FY 2021 accomplishments include:
  - Led the MMAC COVID-19 response team, which included tracking over 1,100 total cases and completing 303 Level 3 cleanings. The MMAC COVID-19 response team was winner of two FAA level awards for their accomplishments.
  - Achieved $700,000 cost avoidance in energy costs.
  - Completed 98 construction projects, valued at $15.3 million, across the MMAC.
  - Performed approximately 21,000 work requests with a cost of over $5.2 million, and performed over 3,000 building inspections.
  - MMAC Energy Team won Outstanding FAA Environmental Achievement Award for reducing their carbon footprint, achieving over 7 million kilowatt hours in electricity savings.
- **The FAA Academy** developed and delivered technical training that enables the FAA workforce to maintain and safely operate the national airspace system. In FY 2021, the FAA Academy:
  - Recorded over 39,300 participant course completions.
  - Successfully transitioned numerous courses to a variety of virtual learning platforms. More than 30,000 participants were trained using virtual platforms.
  - Achieved cost savings/avoidance of $5 million through modernization and process improvement efforts.
  - In response to COVID-19, developed and delivered web-based training to over 1,830 U.S. Customs and Border Protection employees.
- **The Enterprise Services Center** (see also page 37) delivered financial and technology-shared services to over 30 federal agencies, processing millions of financial transactions. FY 2021 accomplishments include:
  - Continued focus on cost-efficiency initiatives such as implementation of electronic invoicing, contract negotiations, etc. resulting in millions of dollars of savings, thereby creating more value for its customers.
  - Achieved over $2.4 million in savings for the FAA through centralized management of FAA cellular services.
  - Completed a 2-year project to migrate Office of Personnel Management's financial system onto the Department of Transportation's (DOT) Financial System and Procurement System in support of shared services across government, resulting in substantial cost savings to the U.S. government, increased efficiencies, and reduced redundancies.
  - Processed over $39.3 billion in disbursements authorized under the Coronavirus Aid, Relief, and Economic Security Act, the Consolidated Appropriations Act of 2021, and the American Rescue Plan Act of 2021.
  - Processed over $197.6 million in direct disbursements to eligible recipients under the DOT Aviation Manufacturing Jobs Protection Program.
  - Processed over $62.7 billion in grant payments for the DOT, with 100 percent on time.
  - Processed 50,548 travel vouchers across DOT, with over 98 percent on time. ■

Enterprise Services Center

The FAA's Enterprise Services Center (ESC), a Mike Monroney Aeronautical Center organization in Oklahoma City (see additional discussion of ESC services and accomplishments on pages 36 and 144), is embracing the momentum of government innovation through digital transformation using the latest agile software development processes and new technologies such as Intelligent Automation.

A highly collaborative effort is underway at ESC, focused on improving services, organizational effectiveness, and mission capabilities. One of the Intelligent Automation approaches pursued by ESC is Robotic Process Automation (RPA). RPA will allow employees at ESC to focus on strategically creative work while robots take care of more mundane and repetitive tasks. The goal of RPA is not to replace human workers, but to introduce digital workers to augment the existing workforce. RPA has a variety of benefits such as improved accuracy, improved audit compliance, improved data quality, business efficiency, cost savings, and cost avoidance.

ESC's Financial Services Division rolled out their first two RPA processes to production in late July. One automation is used exclusively for testing the robot's communication points, and the other monitors the robot email account for out-of-office replies and system-generated messages. ESC followed this successful migration with four additional business function automations from the Financial Services Travel branch. As RPA is socialized across the enterprise, ESC staff members are quickly recognizing its potential and the opportunities have grown to over 40 prospective automations. ESC plans to build on their early successes and lessons learned to create a robust automation pipeline that delivers new capabilities at a predictable pace.

Use cases for RPA are not limited to finance-related activities. To varying degrees, there are opportunities to use RPA across many ESC functions including acquisitions, business operations, and information technology operations. ESC hosted an Immersion Lab to further explore potential opportunities for RPA in these business areas and how to work with automation at scale.

RPA is not the only intelligent automation approach used or tested by ESC. ESC utilizes other automation tools that leverage system log file reviews, security policies, and system baseline configurations. ESC has also implemented automation for data quality reviews and tools to upload transactions via a web-based application. These tools reduce the labor costs associated with day-to-day operations while improving accuracy and predictability, and allowing employees to focus on higher-value work.

ESC is invested in embracing innovation and empowering the workforce with the tools needed to be good stewards of taxpayer money and to focus on higher-value work and data analysis.

Rendering of the exterior renovations to the Multipurpose Building, the main ESC facility at the Mike Monroney Aeronautical Center. This facility is currently under renovation, with an anticipated completion date in fall 2022. Rendering provided by FSB Architects and Engineers.

Analysis of Systems, Controls, and Legal Compliance

Financial Management Systems Strategy and Actions

Financial Management Systems Strategy

The FAA's financial management systems strategy is based on a framework called the Federal Enterprise Architecture, which is recognized across the federal government as the best practice for aligning business and technology resources to achieve strategic outcomes. Achieving this in all areas of our financial systems, including making it part of our organizational design, entails ongoing focus and performance improvement. Our financial management systems strategy can be divided into five categories: Business, Applications, Data, Information, and Services. A summary of each is provided below:

Business. Continues to transition to increasingly centralized management of financial information to optimize efficiency, transparency, and consistency.

Applications. Decreases the number of financial management applications being used by the agency via a financial systems modernization program.

Data. Implements a financial data management roadmap and stewardship council to govern the use and sharing of FAA financial data as a common asset.

Information. Builds an FAA-wide financial data "warehouse" to increase the consistency of reporting while maintaining each organization's ability to meet individual core mission business reporting requirements.

Services. Defines and delivers shared operational and infrastructure services for the FAA's multiple financial systems.

Systems Critical to Financial Management and Actions

The FAA is working with DOT in ongoing efforts to consolidate and modernize its financial management systems and streamline processes and financial reports. Maintaining fewer systems will enable the FAA to operate more efficiently by having fewer points of data entry, fewer systems to reconcile with the official sources of the data, and fewer systems on which to train employees. Below is a summary of the systems critical to FAA's financial management and the actions and improvements that are recently completed, underway, or planned for each:

Accounting. DELPHI is an Oracle web-based financial management system and is integrated with the Procurement Information System for Management (PRISM), which is discussed below. DELPHI, a DOT-wide system, supports the FAA's business objectives; reduces program exposure to various sources of risk; automates, streamlines, and standardizes financial and business processes; and provides accurate financial results. The following are some highlights of DELPHI's features and benefits:

- One system and one set of books shared by all FAA regions, centers, and headquarters.
- Ability to share and extract information and data from a common source.
- Accurate financial statements produced directly from the system.
- Accurate and timely information available to management for decision-making.
- Flexibility for program and accounting managers to report financial information.
- Clear lines of responsibility and accountability on projects that improve FAA's ability to measure program effectiveness.
- Accurate cost and lifecycle asset valuations.

Acquisition. PRISM is the official internet-based system for procurement processing for the agency. PRISM supports the entire procurement life cycle, including generating and maintaining procurement documentation and contractor award information. Until this year, PRISM interfaced with the agency's accounting system, DELPHI, using Oracle/Compusearch Integration (OCI) software. In FY 2021, the FAA upgraded to PRISM version 7.4. This software upgrade provides a more efficient interface with vendors, allows for easier upgrades in the future and eliminates the OCI interface with DELPHI. The interface with DELPHI was replaced with a service-oriented architecture where services are provided to PRISM and other components in a more common and efficient manner.

Travel. E2 Solutions, used across DOT and by many other federal agencies, provides the FAA with end-to-end travel approval, booking, and expense management capabilities. Last year, E2 Solutions was modernized to synchronize reservation and ticket data and add new system validation rules to ensure that reimbursements are compliant with financial policy.

Management Control Highlights

Financial Management Integrity: Controls, Compliance, and Challenges

On November 9, 2021, the FAA Administrator reported to the Secretary of the Department of Transportation (DOT) an unmodified statement of assurance under the Federal Managers' Financial Integrity Act (FMFIA) of 1982. Every year, program managers in the FAA's lines of business and staff offices assess the vulnerability of their programs. Based on these assessments, reviews are conducted to determine their compliance with Sections 2 and 4 of FMFIA. Section 2 requires management controls to be in place, and Section 4 requires financial systems to conform to government-wide standards. The head of each line of business or staff office identifies, in writing, to the Administrator any potential material internal control weakness or system nonconformance. Identified weaknesses deemed material are consolidated in a Statement of Assurance signed by the Administrator and sent to the DOT Secretary. This FAA response becomes a part of the DOT Statement of Assurance sent to the President. FAA also reports to DOT compliance with the Federal Financial Management Improvement Act (FFMIA) of 1996. The FFMIA requires an assessment of adherence to financial management system requirements, accounting standards, and U.S. Standard General Ledger transaction level reporting. For FY 2021, FAA is reporting overall substantial compliance.

Enterprise Risk Management at the FAA

Office of Management and Budget (OMB) Circular A-123 is the detailed guidance for management's responsibility for reporting and internal controls. While initially the guidance focused on internal controls over financial reporting, OMB has expanded its scope to consider both financial and operational controls over the past few years.

The FAA collaborated with the DOT to discuss the best approach to incorporate risk management into FAA's long-standing risk-based business architecture. As a mature risk-based entity whose mission is to provide the safest and most efficient aerospace system in the world, the FAA has a long-standing performance committee to monitor agency strategic goals. This committee provides monthly progress reports of the status of the strategic goals to the Administrator.

Technicians working on the Instrument Landing System at Seattle-Tacoma International Airport in Washington. FAA photo.

FAA employee working at FAA headquarters in Washington, D.C. FAA photo.

Using the performance committee structure and existing strategic goals, FAA developed a specific enterprise risk management implementation plan for OMB Circular A-123 that identified a governance approach and a Chief Risk Officer. Each year, with approval from our Enterprise Risk Management Board and our Chief Risk Officer, FAA prepares and submits a risk profile document to the DOT for inclusion in the department-level risk profile that is submitted to OMB. A risk profile examines the nature and level of threats faced by an organization and the effectiveness of controls in place to manage those risks. In its FY 2021 risk profile document, the FAA aligned its risks to DOT's top risk area, which pertains to integrating innovations safely while reducing transportation fatalities.

As the FAA COVID-19 recovery continues and uncertainty exists, FAA took this challenge into consideration when identifying and prioritizing enterprise risks. FAA will continue to strengthen its risk management and reporting process through comprehensive collaboration with various stakeholders, to more effectively identity key risks and opportunities, develop risk responses, and implement timely mitigation actions.

To support the safe, expeditious, and efficient transportation of approved **COVID-19 vaccines**, the FAA collaborated with aviation stakeholders and our federal partners to provide around-the-clock air traffic services to keep air cargo moving.

Read more, here: **https://medium.com/faa/faavaccine-flights-get-priority-treatment-7af090d8ece2**.

Payment Integrity

The Payment Integrity Information Act of 2019 (PIIA) requires federal agencies to annually report information on improper payments to the President and the U.S. Congress. The PIIA spells out a systematic approach by which the federal government must address a difficult and often complex problem. Paying billions of dollars every year, the federal government cannot afford to be at risk of improper payments. In addition, OMB Circular A-123, Appendix C, *Requirements for Payment Integrity Improvement* (last updated March 5, 2021), provides government-wide guidance for preventing and recovering losses.

The purpose of these regulations and guidance is to improve agency efforts to reduce and recover improper payments. Specifically, PIIA requires agencies to identify and estimate their improper payments, conduct payment recovery audits, reuse recovered improper payments, and report compliance actions.

In simple terms, an improper payment is any payment that should not have been made at all, was paid in the incorrect amount (overpayments or underpayments), was paid to an ineligible recipient, or was for an ineligible good or service. It is important to note that payments made without complete supporting documentation are also considered improper payments.

Under the PIIA, agencies are required to assess all programs and financial activities in order to identify those that are most susceptible to improper payments. This risk assessment allows agencies to identify and focus on areas that have the potential for significant improper payments.

OMB defines significant improper payments as those payments exceeding both $10 million and 1.5 percent of total program payments, or exceeding $100 million. The FAA's FY 2021 PIIA review did not identify any programs or activities with potential for significant improper payments, as determined by OMB. Additional details can be found in the Other Information section of this report on page 140.

Management Assurances

Federal Managers' Financial Integrity Act and Federal Financial Management Improvement Act Assurance Statement

Fiscal Year 2021

The FAA is responsible for managing risks and maintaining effective internal control and financial management systems that meet the objectives of Section 2 and Section 4 of the *Federal Managers' Financial Integrity Act of 1982*. This includes conducting assessments to determine the effectiveness of internal control and conformance with financial system requirements. The FAA conducted its assessments in accordance with OMB Circular No. A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control*.

The FAA's assessments considered the effectiveness of internal control over operations, financial reporting (which includes safeguarding of assets), and compliance with applicable laws and regulations. The objectives are to ensure:

- Effectiveness and efficiency of operations
- Reliability of reporting for internal and external use
- Compliance with applicable laws and regulations

Based on the results of this assessment, the FAA can provide reasonable assurance that its internal control over operations, financial reporting, and compliance were operating effectively as of September 30, 2021. No material weaknesses were found in the design or operation of internal control over financial reporting.

The FAA also assessed its financial management systems' conformance with financial system requirements, in accordance with the requirements of OMB Circular No. A-123 Appendix D, *Compliance with the Federal Financial Management Improvement Act of 1996*. Based on this assessment, the FAA can provide reasonable assurance that its financial management systems conform to these requirements and no material non-conformances or instances of noncompliance were identified.

STEVE DICKSON
Administrator
November 9, 2021

PERFORMANCE RESULTS

The Automated People Mover makes huge progress as the construction activity takes advantage of the low volume of vehicle traffic during California's stay-at-home orders. The Automated People Mover is the centerpiece of the Los Angeles International Airport landside access modernization project. The project is scheduled for completion in 2023. Photo by Kelvin Cheng/iStock Images.

Performance Measures Overview

In this section, the FAA discusses its achievements in addressing our 20 performance measures.

The FAA is currently updating its strategic plan that will establish new strategic goals and objectives for FY 2022 through FY 2026. The FAA's strategic goals align with the Department of Transportation's draft strategic plan. In alignment with the administrator's vision, the new strategic goals are Safety, People, Global Leadership, and Operational Excellence. Once completed, the strategic plan will be found here: ***https://www.faa.gov/about/plans_reports/***.

The long-term goals described in the strategic plan inform the annual measures included in this year's Performance and Accountability Report. While some of these measures were also published in last year's report, several have been revised, and others are new measures. Each of the annual measures aligns to a specific strategic goal:

- **Safety**: Oversee and operate the safest aerospace system in the world, all with a culture of continuous improvement.
- **People**: Strengthen our current and future aviation workforce by holding ourselves accountable, developing our people, and planning for the aviation workforce of the future.
- **Global Leadership**: Advance global aviation safety, operational excellence, and innovation by leading and collaborating with aviation authorities globally.
- **Operational Excellence**: Operate the world's most efficient aerospace system through daily execution, continuous improvement, and infrastructure investment.

In the pages that follow, the FAA provides the FY 2021 performance targets, a discussion of our FY 2021 performance, and, when available, up to five years of historical trend data. We also present a graph of performance measures when appropriate.

In FY 2021, the FAA was successful in achieving all 20 of the agency's performance measures. The FAA has noted the measures for which the data provided are preliminary.

Although in some cases the FAA achieved a result this year that was significantly better than the target, the FAA did not change its targets to reflect the prior year's result. Annual performance is subject to greater variability than long-term performance. Over time, short-term trends tend to balance out, and the long-term view provides a more accurate picture of agency performance. Moreover, some annual targets use data acquired over a multi-year period. The targets used in this section have been set to measure the FAA's performance in meeting long-term goals.

We also include a discussion on page 76 of how our performance data is verified, and deemed complete and reliable.

Air Traffic Controllers at work in the Louisville-Standiford Terminal Radar Approach Control facility in Kentucky. FAA photo.

SAFETY

Oversee and operate the safest aerospace system in the world, all with a culture of continuous improvement.

Performance Measure	Org.	FY 2018 Results	FY 2019 Results	FY 2020 Results	FY 2021 Target	FY 2021 Results	FY 2021 Status
Commercial Air Carrier Fatality Rate* Reduce the commercial air carrier fatalities per 100 million persons on board U.S. carriers by 50 percent over 18-year period — FY 2008–2025. Target for FY 2021 is 5.4.	AVS	0.1	0.5	0.6[1]	5.4	0.0[2]	✓
Commercial Surface Safety Risk Index Manage the weighted surface safety risk index at or below 0.35 per million airport operations for commercial aviation.	ATO	New Measure for FY 2019	0.105[4]	0.053	0.35	0.037[3]	✓
Non-Commercial Surface Safety Risk Index Manage the weighted surface safety risk index at or below 0.60 per million airport operations for non-commercial aviation.	ATO	New Measure for FY 2019	0.537[4]	0.204	0.6	0.146[3]	✓
Top 5 Corrective Action Plan Implementation Through Collaboration Across the Air Traffic Organization (ATO) Implement 85 percent of approved mitigation activities in association with ATO's Top 5 identified trending safety issues in the national airspace system.	ATO	89%	93%	86%	85%	87%	✓
General Aviation Fatal Accident Rate* Reduce the general aviation fatal accident rate to no more than 0.89 fatal accidents per 100,000 flight hours by 2028. FY 2021 Target: 0.96.	AVS	0.89	0.95	0.91[1]	0.96	0.73[2]	✓
Commercial Space Licensed and Permitted Launch and Reentry Safety Ensure there are no fatalities, serious injuries, or significant property damage to the uninvolved public during licensed or permitted space launch and reentry activities.	AST	0	0	0	0	0	✓
National On-Airport Policy, Processes, and Procedures for Unmanned Aircraft Systems (UAS) FAA is working to enable the national use of UAS on and/or near airports for a variety of mission types.	ATO	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet all five targets	Met all five targets	✓
Unmanned Aircraft Systems Remote Identification (ID) Outreach and Engagement Facilitate early adoption of Remote ID technology by conducting six enterprise-level outreach and engagement activities.	AVS	Updated Measure for FY 2021	Updated Measure for FY 2021	Updated Measure for FY 2021	Conduct six activities	Accomplished six activities	✓

* This performance measure supports a DOT Agency Priority Goal.

✓ Target met ✗ Target not met

1 Preliminary estimate until final results are available in December 2021. We do not expect any change in the result to be significant enough to alter our year-end status of achieving the target.

2 Preliminary estimate until final results are available in December 2022. We do not expect any change in the result to be significant enough to alter our year-end status of achieving the target.

3 Preliminary estimate until the final result becomes available in March 2022. We do not expect any change in the final result to be significant enough to alter our year-end status of achieving the target.

4 Metric revised to reflect data stream enhancements to reflect the most current and accurate information possible.

Commercial Air Carrier Fatality Rate

Reduce the commercial air carrier fatalities per 100 million persons on board U.S. carriers by 50 percent over an 18-year period between FY 2008–2025.	
FY 2021 Target	No more than 5.4 fatalities per 100 million persons on board (this equates to approximately 57 fatalities).
FY 2021 Result	**0.0** fatalities per 100 million persons on board (this is a preliminary estimate until the final result can be confirmed by the National Transportation Safety Board in December 2022).
Public Benefit	As fatal air carrier accidents have declined in terms of average fatalities per accident, this metric reflects FAA's commitment to making air travel even safer.

The commercial air carrier fatality rate metric includes both scheduled and non-scheduled flights of U.S. passenger and cargo carriers, but excludes on-demand (i.e., air taxi) service and general aviation. Accidents involving passengers, crew, personnel, and the uninvolved public are all included.

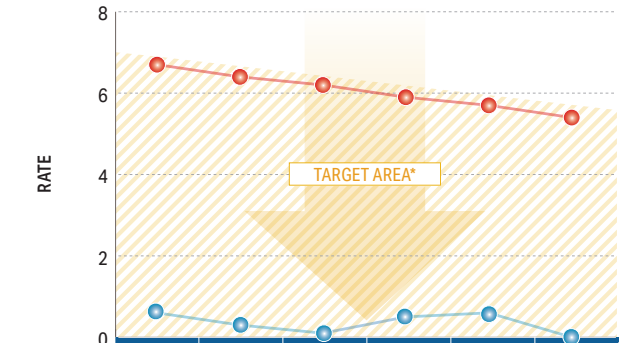
Since the target is fatalities per persons on board, the level of safety is the same regardless of the number of flights in the air. Our target rate this year is 5.4 fatalities per 100 million persons on board which equates to approximately 57 fatalities. This essentially means the FAA has a goal of zero catastrophic commercial aviation accidents with significant loss of life. Additionally, although accidents and incidents still occur infrequently, they are much more survivable when they do happen due to advances in aviation safety, which contribute to our success in meeting our Commercial Aviation Fatality Rate.

The FAA's long-term goal is to reduce the number of fatalities in commercial aviation by 50 percent by 2025, equating to 4.4 fatalities per 100 million persons on board from a baseline of 8.9 that was established during the 1997–2006 timeframe. The annual targets were calculated to reflect a linear reduction over an 18-year period from 2008 to 2025.

In FY 2021, the FAA was successful in ensuring no more than 5.4 fatalities per 100,000 million persons on board by achieving 0.0 fatalities per 100 million people on board. This is the first time we have achieved zero commercial aviation fatalities since FY 2012. Aviation is one of the safest forms of transportation and the FAA strives every year to maintain this distinction. Our success is attributed in part to FAA's establishment of safety-critical regulations and our mandate for air carriers to implement safety management systems. Also critical is the government-aviation industry partnership called the Commercial Aviation Safety Team (CAST), which was established in 1997 to reduce fatality risk in commercial aviation.

COMMERCIAL AIR CARRIER FATALITY RATE

Fatalities per 100 million persons on board



	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Actual	0.6	0.3	0.1	0.5	0.6	0.0[1]
Target	6.7	6.4	6.2	5.9	5.7	5.4
Target Achieved?	✓	✓	✓	✓	✓	✓

1 Preliminary estimate until final results are available in December 2022. We do not expect any change in the result to be significant enough to alter our year-end status of achieving the target.

* Actual results in this area indicate successful performance.

Safety Management Systems

Our commercial safety record indicates that safety management systems have successfully addressed the majority of system hazards that contribute to accidents or incidents. An effective safety management system provides processes to continuously identify hazards and mitigate associated risks before they lead to an accident or incident. For this reason, the FAA continues to work with aviation industry stakeholders to ensure continuous improvement and maturity of safety management systems to identify hazards and mitigate the associated risks within their operations and in the nation's airspace.

A Safety Management System (SMS) requires the organization itself to examine its operations and the decisions around those operations. It allows an organization to adapt to change, increasing complexity, and limited resources. SMS also promotes the continuous improvement of safety through specific procedures such as employee reports and data

collection which are used to predict hazards. Organizations then use this information to analyze, assess, and control risk. Part of the SMS process also includes the monitoring of controls and review of the system itself for effectiveness. SMS helps organizations comply with existing regulations while predicting the need for future action by sharing knowledge and information. Finally, SMS includes requirements that will enhance the safety attitudes of an organization by improving the safety culture of leadership, management, and employees. All of these changes are designed to help the organization incorporate safety in all three forms of thinking—reactive, proactive, and predictive. With these systems in place, the FAA and the aviation industry work together using a proactive approach that continuously improves aviation safety by preventing accidents from happening and reducing incidents as much as possible.

Commercial Aviation Safety Team (CAST)

Our success in commercial aviation safety is due in large part to the aviation industry and government investing in safety enhancements that reduce fatality risk in commercial air travel in the United States. The CAST brings together representatives from government, pilot and air traffic controller associations, airlines, airports, and aviation manufacturers to analyze data, identify top safety concerns, and implement interventions to address fatality risks. The work of the CAST, along with new aircraft regulations and other activities, continues to have a positive impact on reducing the fatality risk for commercial aviation in the United States.

The CAST has developed over 100 safety enhancements to date. The last 22 enhancements were based on non-accident data, demonstrating its progress from reactive safety enhancements to proactive risk mitigation. The CAST has developed an integrated, data-driven strategy to reduce the commercial aviation fatality risk in the United States. To learn more about the CAST, please visit: ***https://www.faa.gov/newsroom/commercial-aviation-safety-team***.

Regulations

On June 10, 2021, the Pilot Records Database final rule was published in the Federal Register. This rule establishes an electronic Pilot Records database that will facilitate the sharing of pilot records among air carriers and other operators and regulates its use.

The FAA is currently developing several other regulations that are designed to enhance aviation safety. These rules cover a broad variety of topics, including: increasing commercial cockpit protection, flight attendant rest requirements, and improving aircraft system safety certification methods.

View from Kodiak Benny Benson State Airport in Alaska. Photo by Tremayne Cobb.

Commercial and Non-Commercial Surface Safety Risk Index

FY 2021 Target	Target 1: Manage the weighted surface safety risk index at or below 0.35 per million airport operations for commercial aviation. Target 2: Manage the weighted surface safety risk index at or below 0.60 per million airport operations for non-commercial aviation.
FY 2021 Result	Target 1: **0.037** *(Preliminary estimate until the final becomes available in March 2022).* Target 2: **0.146** *(Preliminary estimate until the final becomes available in March 2022).*
Public Benefit	The Surface Safety Metric represents the potential for fatal accidents on the runway or taxiway surface. A reduction in the Surface Safety Metric score is an indication of overall safety performance improvements for the flying public in the surface environment.

The Surface Safety Risk Index measures the overall safety performance of the national airspace in the runway environment. It includes all manner of operations (commercial and other types), aircraft, vehicles, and pedestrians in the runway environment. Surface accidents and incidents include runway collision accidents, runway excursion accidents, taxiway collision accidents, runway incursion incidents, runway excursion incidents, and taxiway surface incidents. Operations are defined as total takeoffs and landings. Commercial operations are considered those operating under Federal Aviation Regulations parts 121, 129, and 135; all other operation types are considered non-commercial.

Both metrics are based on a risk index score calculated by applying a score to each surface event based on its proximity to a fatality, with a fatal injury having a score of 1.0. The total of all scores is then divided by total operations expressed as a rate per million operations. The Surface Safety Risk Index remains well below target for both the commercial and non-commercial metrics as a result of the collaborative efforts of FAA lines of business and aviation industry and labor organizations.

The FAA has made significant progress in improving runway safety at U.S. airports over the past 15 years by working with the aviation community on education, training, and airfield improvements such as improved marking and lighting. In July 2015, the FAA initiated the Runway Incursion Mitigation (RIM) program to address runway/taxiway intersections with high incidence of runway incursions related to airport geometry. As of October 2021, there are 130 RIM locations at 79 airports. Airports use a combination of strategies to improve these intersections, such as changes to the airport layout, lights, signs, markings, and operational procedures. These strategies reduce the likelihood of pilot confusion and have a direct impact on reducing runway incursions. To date, the RIM program completed mitigations at 73 locations, with projects started at an additional 16 locations as of October 2021. Mitigations reduced runway incursions by an average of 81 percent at RIM locations. The monitoring of mitigated RIM locations continues over time to determine if mitigation efforts were successful, and if additional mitigation is necessary.

The FAA has also worked to mitigate the impacts of runway excursions by improving runway safety areas (RSAs) at commercial service airports. An RSA is a paved or graded surface around the runway that reduces the risk of damage or injury in the event of a runway excursion. For example, in July 2013, Asiana Airlines Flight 214 landed short on Runway 28L at San Francisco International Airport. Although the aircraft sustained severe damage, a majority of those on board the aircraft survived, with many being able to walk away, due to an RSA improvement that provided 600 feet of available "undershoot" before the runway.

Many airports were built before the current 1,000-foot RSA standard was adopted, and many had RSAs that weren't improved until the beginning of the RSA Improvement Program, approximately 20 years ago. In some cases, it is not practicable to achieve the full standard RSA because of a lack of available land. For this reason, the FAA has worked with airports to install Engineered Material Arrestor Systems (EMAS) that use crushable material placed at the end of a runway to stop an aircraft that overruns the runway. The tires of the aircraft sink into the lightweight material and the aircraft is decelerated as it rolls through the material. Currently, EMAS products are installed at the end of 115 runways at 67 U.S. airports. To date, there have been 17 incidents where EMAS has safely stopped overrunning aircraft with a total of 419 crew and passengers aboard those flights. For example, in July of 2021, a flight into Reading Regional Airport, Pennsylvania, with seven passengers and two crew, overran the end of the runway and came to a stop in the EMAS off the end of the runway. There were no injuries and the aircraft sustained minor damage.

To learn more about runway safety, please visit: ***http://www.faa.gov/airports/runway_safety/***.

Top 5 Corrective Action Plan Implementation through Collaboration across the Air Traffic Organization (ATO)

FY 2021 Target	Implement 85 percent of approved mitigation activities in association with ATO's Top Five (5) identified trending safety issues in the national airspace.
FY 2021 Result	**87 percent** (76 of 87 mitigations implemented)
Public Benefit	The adoption of this metric benefits the public by identifying trending safety issues in the national airspace and enabling risk-based decision making and mitigation strategies.

The Top 5 Program is a powerful illustration of how the ATO uses a proactive approach to safety, focusing its resources and data on identifying safety issues, taking corrective actions, and monitoring the results. The program utilizes safety data to identify growing safety risks in the national airspace system. These risks are grouped into issues, with the top five identified issues establishing the Top 5 "Most Wanted" metric. A cross section of ATO representatives come together for a Safety Roundtable to select the Top 5. Roundtable members review data extracted from various reporting systems, direct feedback from facilities, trends from voluntary safety reporting programs such as the Air Traffic Safety Action Program and the Confidential Information Share Program, and accident and National Transportation Safety Board data, among other sources.

Once the Top 5 issues are identified, mitigation strategies are established for each issue based on review of incidents, accidents, and other relevant data. These mitigation strategies go through a yearly cycle of review and refinement as well as the establishment of specific mitigation activities to support the mitigation strategies that address each issue. Additionally, the process includes continuous tracking and reporting of mitigation activities implementation, as well as the impacts of the activity. Once the issue is no longer a growing safety concern, it is closed out. Finally, the Roundtable selects a new issue based on prevailing safety data. This process ensures that the FAA is taking a proactive stance in constantly analyzing data to identify and mitigate growing risks before they become systemic problems. Listed below are the Top 5 safety issues for 2021:

- **Altitude Compliance**: Aircraft operating at unexpected or unintended altitude.
- **Traffic Advisories/Safety Alerts**: Conflict between aircraft becomes imminent because a traffic advisory and/or safety alert was not issued.
- **Pilot Report Solicitation/Dissemination**: Pilots do not receive pilot reports of weather encountered in flight.
- **Wrong Surface Landings**: Aircraft lands or attempts to land on the wrong surface.
- **Notices to Airmen (NOTAMs)**: Ensure NOTAMs are accurate and efficiently disseminated.

For FY 2021, the ATO identified and approved 87 mitigation activities across these top five trending issues, with the goal to implement 85 percent, or at least 74 of the 87 activities. The FAA has surpassed this goal by implementing 76 of the identified mitigation activities.

While COVID-19 has impacted some Top 5 program activities, it has not prevented the FAA from developing new methods to work around these unforeseen circumstances. This year, the FAA achieved planned mitigation activities by implementing virtual communication and team flexibility. Despite the COVID-19 pandemic, all Top 5 participants continued to demonstrate their unwavering commitment to making our national airspace safer through continued analysis of safety risks.

General Aviation (GA) Fatal Accident Rate

FY 2021 Target	No more than 0.96 fatal accidents per 100,000 flight hours in FY 2021.
FY 2021 Result	**0.73** (Preliminary estimate until the final result can be confirmed in December 2022).
Public Benefit	By tracking the rate of fatal GA accidents per flight hours, the FAA can more accurately identify trends, indicating a decrease or increase of potential safety risks. The data is used for safety enhancements in flight procedures, mechanical and technological improvements in aircraft, pilot education, and flight hazard research.

The United States has the most vibrant GA community in the world, with more than 200,000 active aircraft, including amateur-built aircraft, rotorcraft, balloons, and highly sophisticated turbojets. The FAA is continuously working with the greater GA community and industry to reduce the number of general aviation fatalities.

In FY 2021, we achieved our goal of not exceeding a rate of 0.96 fatal accidents per 100,000 flight hours. This equates to less than one GA fatal accident for every 100,000 hours flown. The FAA and the GA community have agreed that a GA fatal accident rate, rather than the number of fatal accidents, more accurately reflects the level of system safety as the volume of GA traffic fluctuates. Using this metric allows for an accurate comparison of GA safety across fiscal years, geographic jurisdictions, and varying aviation traffic levels.

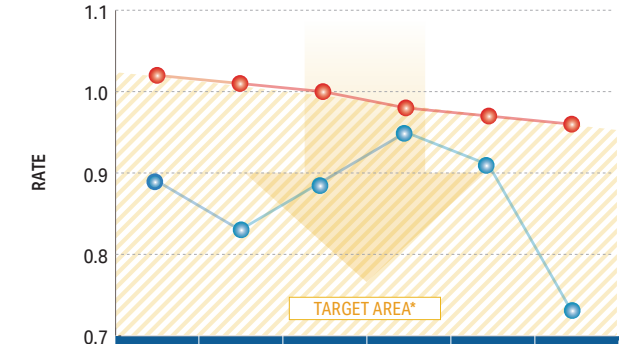
In FY 2021, the FAA continued to work with the General Aviation Joint Steering Committee (GAJSC) on improving general aviation safety. The GAJSC, formed by the FAA and industry, uses a non-regulatory, proactive, and data-driven strategy to improve safety. The GAJSC has developed 46 safety enhancements aimed at addressing the top causes of fatal accidents. Of this total, 30 have been completed to date. The enhancements address engine failures, situations in which flight crews are unable to maintain control of an aircraft in flight, and controlled flight into terrain (unintentional collisions with the ground, a mountain, or a body of water). The safety enhancements include technological improvements, improved education and training for both pilots and mechanics, increased awareness of issues related to medications, and outreach on a range of topics aimed at preventing loss of control, controlled flight into terrain, and accidents related to engine failures. Due to the ongoing COVID-19 pandemic, the start of any new studies has been delayed. However, the next GAJSC study will look into data on mechanical failures not related to engine failure. In FY 2021, the GAJSC working group completed their analysis and findings on the topic of controlled flight into terrain.

The GAJSC produced a document, working with the GA operators and the community to document risks, lessons learned, and mitigations developed during the COVID-19 pandemic. This document reflects the unprecedented open and transparent exchange of information between the FAA and industry to ensure safety remains the top priority.

As part of its strategy to reduce accidents, the GAJSC regularly reaches out to the general aviation community to educate pilots and other stakeholders on the benefits of sharing safety data through the Aviation Safety Information Analysis and Sharing (ASIAS) program. This is a continuous effort with data submitted by the aviation community to ASIAS. The data is confidential, de-identified, and not used for enforcement purposes. The goal is to assist the GA community in reducing the number of fatal accidents by looking for systematic risks that could potentially lead to fatal accidents. The GAJSC has established training topics for airmen based on GAJSC analysis of aircraft accidents compiled from this data.

GENERAL AVIATION FATAL ACCIDENT RATE

Fatal accidents per 100,000 flight hours



	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Actual	0.89	0.83	0.89	0.95	0.91[1]	0.73[2]
Target	1.02	1.01	1.00	0.98	0.97	0.96
Target Achieved?	✓	✓	✓	✓	✓	✓

1 Preliminary estimate until final results are available in December 2021. We do not expect any change in the result to be significant enough to alter our year-end status of achieving the target.

2 Preliminary estimate until final results are available in December 2022. We do not expect any change in the result to be significant enough to alter our year-end status of achieving the target.

* Actual results in this area indicate successful performance.

The U.S. Helicopter Safety Team (USHST) is another collaborative effort between the FAA and industry that has approved and initiated 16 safety enhancements related to helicopter safety. Initially, the USHST had approved and initiated work on 21 safety enhancements. Several enhancements had areas of significant overlap that could be completed through the combined effort of one enhancement rather than several different ones. This resulted in the overall count of enhancements reducing from 21 to 16 during FY 2021. Of the 16 safety enhancements, 8 have been completed and are currently in outreach mode, the remaining enhancements are expected to be completed in the next 3–5 years.

The USHST holds a meeting every 2 months where industry leaders and educators reach out to the rotorcraft industry in pursuit of the mission to drive the helicopter fatal accidents to zero. The FAA is working with industry by supporting the USHST safety enhancements that are designed to reduce fatal accidents during flights in poor weather conditions and at low altitudes.

The top three occurrence categories for fatal accidents are: 1) loss of control inflight, 2) unintended flight into adverse weather conditions, and 3) low altitude operations where the helicopter strikes an object. Over 50 percent of the helicopter fatal accidents occur in one of these three occurrence categories—that is where the USHST is maintaining its focus. The latest public outreach is a commercial video titled "56 Seconds to Live." This video was specifically intended to leverage what was learned through data analysis to address reduction of unintended flights into adverse weather conditions.

To spread safety awareness throughout the general aviation community, the FAA Safety Team (FAASTeam) conducts live safety seminars and webinars throughout the fiscal year. The FAASTeam is comprised of mostly volunteer representatives that are experts in particular fields, like mechanics or piloting, who help promote safety outreach to the general aviation public and provide training and resources specific to their specialties and regions while being supported by the FAASTeam program managers.

On a bi-weekly basis, the FAASTeam, in collaboration with the FAA's Unmanned Aircraft Systems (UAS) Integration Office, presented webinars to the Flight Standards Safety Assurance Offices focusing on relevant UAS topics to ensure they have the knowledge necessary to address UAS concerns in the national airspace. The FAASTeam supported the UAS Integration Office in an additional 27 live webinars. In response to numerous requests coming from the FAA website, internal and external stakeholders, the FAASTeam has sent approximately 1,600,000 notices, reaching as many as 48,000,000 people on various topics, as well as reaching 9,000,000 through FAAST Blasts. Through the FAASafety.gov website, the FAASTeam reaches 52,364,000 airmen annually through email distribution.

Commercial Space Licensed and Permitted Launch and Reentry Safety

FY 2021 Target	Ensure there are no fatalities, serious injuries, or significant property damage to the uninvolved public during licensed or permitted space launch and reentry activities.
FY 2021 Result	**0.0** No fatalities to the uninvolved public.
Public Benefit	The FAA's oversight of commercial space launch industry activities has resulted in no loss of life or public property damage while maintaining a robust entrepreneurial environment fostering significant innovations and economic opportunities for the American public.

In FY 2021, there were 64 licensed and permitted commercial space launches and reentries. The FAA was successful in collaborating with the commercial space industry to maintain its perfect record of no fatalities, serious injuries, or significant property damage to the uninvolved public during licensed or permitted space launch and reentry activities. Since its involvement in commercial space activities, the FAA has licensed or permitted more than 488 launches and reentries, oversees 12 launch or reentry sites (spaceports), and has issued 6 active safety approvals. Safety approvals are issued by the FAA when a component, process, service, or qualified person has been evaluated for safety suitability and found to be qualified and within acceptable risk standards when supporting or conducting a space activity. Once approved, a component, service, or person does not have to be reevaluated for every licensed activity.

The commercial space industry continues to grow at a tremendous pace. Since 2012, licensing workload has increased over 1,000 percent while FAA staffing associated with licensing and permits has increased about 30 percent. In FY 2020, there were 33 licensed launches and reentries; that number climbed to 64 in 2021—a 94 percent year-over-year increase. To safely accommodate this increase in space operations, the FAA published new safety regulations named Code of Federal Regulations part 450 Streamlined Launch and Reentry Licensing Requirements, in March 2021. These new regulations are a complete overhaul of how FAA licenses commercial space launches and consolidates four prescriptive rules into one performance-based standard. With performance-based regulations, the FAA focuses on achieving results rather than trying to mandate the specific processes or technologies used to achieve those results. The FAA also published 10 supporting Advisory Circulars which provide concise, technically accurate information to help the aerospace industry comply with regulations.

In addition to the growth in the number of commercial space operations, the complexity of the missions coming to the FAA for approval continues to evolve and change dramatically. This year, the Office of Commercial Space Transportation continued to prepare for an extremely dynamic and rapidly maturing set of future missions, which include orbital and suborbital space tourism, interplanetary travel, space-based internet services, commercial space stations, and innovative new designs for traditional launch systems.

In 2021, private space companies continued to extend the realm of commercial space transportation activities:

- On July 11, Virgin Galactic launched the SpaceShipTwo rocket carrying two pilots and four crew into suborbital space. The launch from Spaceport America in New Mexico was an operation test conducted prior to the establishment of scheduled commercial spaceflights.
- On July 20, Blue Origin launched their New Shepard suborbital launch vehicle from their West Texas launch site. The flight carried four people, including the oldest and youngest people ever to fly into space. It also included the first person designated as a spaceflight participant under FAA rules.
- SpaceX continued to provide spaceflight capability to National Aeronautics and Space Administration (NASA) astronauts and the International Space Station (ISS). This capability has eliminated U.S. dependence on high-cost Russian transportation to the ISS. The company also continued its efforts to develop a reusable super-heavy lift launch system, known as the Starship Super Heavy system. It is designed to be the world's tallest, most powerful rocket. Composed of two separating rocket stages, it stands at approximately 394 ft. in height, will be fully reusable, and is estimated to be capable of launching between 100-150 tons to low earth orbit (250 tons if the rocket is not intended for reuse). SpaceX has already conducted multiple suborbital tests of the Starship vehicle from their Boca Chica, Texas launch site.
- Boeing continued its development of their commercial capsule and executed a demonstration flight for NASA in late 2021.

To view FAA's fact sheet on commercial space transportation activities, please visit: ***www.faa.gov/space/***.

National On-Airport Policy, Processes, and Procedures for Unmanned Aircraft Systems (UAS)

FAA is working to enable the national use of UAS on and/or near airports for a variety of mission types. In FY 2021, FAA developed required processes and procedures for FAA-wide use of commercial UAS vendors for facility maintenance inspections and surveillance of FAA towers, radars, buildings, and other assets. FAA will leverage the development of a national on-airports policy to accomplish this strategic priority. When fully developed, the policy will provide clear guidance for safely allowing on and near airport UAS operations for multiple uses, including aircraft inspections and maintenance parts delivery.

FY 2021 Target	Target 1: Publish a national policy for airspace access for UAS operations on or near airports. Target 2: Develop a UAS maintenance implementation plan and data management plan to support Technical Operations for maintenance and inspections. Target 3: Complete phase 1 of UAS inspections to support the evaluation of UAS applications for on-airport operations. Target 4: Assess available data sources, and conduct data analyses to determine the effectiveness of risk mitigations associated with the national use of UAS on and/or near airports across FAA-approved mission types. Target 5: Participate in the development and the update to policy and procedures related to UAS operations on or near airports.
FY 2021 Result	Target 1: The national policy is published, effective September 6, 2021. Target 2: Draft implementation and data management plan to support Technical Operations for maintenance and inspections are developed and delivered. Target 3: All phase 1 UAS inspections to support the evaluation of UAS applications for on-airport operations are complete. Target 4: Data analysis to determine the effectiveness of risk mitigations associated with the national use of UAS on and/or near airports across FAA-approved mission types are complete. Target 5: Notice JO 7210.933 UAS Operations on Airports and JO 7200.23C Processing of Unmanned Aircraft Systems Requests were published, both effective September 6, 2021.
Public Benefit	The National On-Airport Policy, Processes, and Procedures for Unmanned Aircraft Systems paves the way to safely and efficiently increase UAS use on or near airport operations for improving the safety and efficiency of the airport environment.

The remote capabilities of UAS, along with their on-board sensor and imaging technologies, have vastly expanded and improved in recent years. These capabilities could reduce risk for FAA personnel performing infrastructure inspections and maintenance while maintaining the safety, security, and operability of the airport environment. For example, UAS could be used for post-natural disaster inspections and for parts delivery where more traditional transportation methods might be unavailable.

FAA pursued this opportunity with a phased exploration and implementation approach. This included developing a national on-airports policy, developing and executing appropriate use cases, and approving commercial vendors to conduct UAS operations for the FAA. Assessing the effectiveness of safety risk mitigations associated with these operations is a key component in ensuring the continued safety of the national airspace as these new operations are introduced.

In order to meet Target 1, FAA defined the "on and near airport" environment that UAS would operate in. This policy ensures that the safety of the national airspace is not impacted by the introduction of UAS around the airport environment.

Airports present unique risks for UAS operations. These are congested airspaces shared with both commercial airlines and general aviation. The FAA published the new national policy in September.[1]

In order to meet Targets 2 and 3, FAA developed concepts and use cases for deploying UAS to support inspections. This will reduce risks to FAA personnel while still accomplishing the mission. For FY 2021, 15 types of infrastructure inspections were completed. Observations and data from these field missions were used to develop preliminary maintenance implementation and data-management plans that support policy establishment, coordination requirements, and safety evaluations for on-airport operations.

In order to meet Target 4, FAA gathered data related to current on-airport UAS operations and the safety mitigations employed in those applications. Three sources of data were reviewed: Certificates of Waiver or Authorization; operating parameters for model airplane hobbyist organizations; and the Safety Management Tracking System (SMTS). SMTS was identified as the best source of data for analysis to determine if further data are needed to assess the safety level of these new operations.

1 This policy is being added to FAA Order JO 7210.3 "Facility Operation and Administration"

CROSS CHECK YOUR KNOWLEDGE

Using Unmanned Aircraft Systems for COVID-19 Response and Recovery

The FAA's role as regulator means that we must unlock not only the economic benefits of Unmanned Aircraft Systems (UAS), but also the societal ones. Consistent with that role, is our task and privilege to facilitate the use of drones to reduce danger to humans or, said differently, to enable relief efforts. When COVID-19 was named a national emergency in 2020, the FAA took a proactive approach and began enabling drone use for COVID-19 response efforts within our existing regulations and emergency procedures. As needed, we used special approvals—granting some in less than an hour.

During the pandemic, many participants in our Integration Pilot Program (IPP)—which brings state, local, and tribal governments together with UAS operators and manufacturers to test and evaluate the integration of civil and public drone operations into our nation's airspace—were able to pivot from their original missions to support COVID-19 response and recovery. For example:

- UPS Flight Forward used its certification to provide prescription deliveries to a retirement community in Florida and conduct medical deliveries near Charlotte, North Carolina.
- Wing Aviation used its certification to increase its partnerships with local businesses in Christiansburg, Virginia, to significantly increase contactless deliveries—including library book deliveries to children.
- The Chula Vista Police Department in California used drones to conduct outreach to homeless communities in remote canyon areas to direct them to medical assistance, food, and personal protective equipment distribution locations.
- Some IPP teams responded to the pandemic by delivering medical equipment and personal protective equipment to frontline workers. Companies operating under the Small Unmanned Aircraft Systems Rule also joined the fight. One of those is Flytrex, which conducted operations in certain locations to deliver food and essential goods from select businesses to residential backyards.

While the IPP concluded early this fiscal year, we have since been collaborating with industry partners in BEYOND, the successor program to the IPP, to enable delivery of medical supplies and food items.

Read more about the BEYOND participants, here: ***https://www.faa.gov/uas/programs_partnerships/beyond/lead_participants/***.

Given the unique risks posed by the airport environment, the FAA must be certain that the safety mitigations used in these UAS operations work as intended. This work will provide leading indicators for potential issues with on-airport UAS operations and enhance the agency's proactive safety culture.

In order to meet Target 5, FAA developed draft order 4040.UAS to define requirements for commercial UAS vendors seeking to conduct FAA missions. Developing this draft order required extensive coordination across the agency to ensure all necessary information was reviewed and properly accounted for.

The use of commercial UAS services in support of flight inspection and technical operations missions is a large undertaking and has the potential to change the way the FAA uses its resources for maintaining and improving the national airspace.

Unmanned Aircraft Systems (UAS) Remote Identification Outreach and Engagement

FY 2021 Target	Facilitate early adoption of Remote Identification (ID) technology by conducting six enterprise-level outreach and engagement activities. Target milestones include: Milestone 1: Establish a cross-agency working-level enterprise-wide outreach and engagement team. Milestone 2: Develop a detailed other external media plan. Milestone 3: Develop a detailed social media plan. Milestone 4: With appropriate internal and external stakeholders, develop a series of virtual informational events (content/schedule/vehicle). Milestone 5: Develop educational materials for Federal Aviation Administration/Department of Transportation employees. Milestone 6: Ensure consistent Remote ID messaging across FAA.
FY 2021 Result	The final rule was published in the Federal Register on January 15, 2021 with an original effective date of March 16, 2021. Corrections were made to the rule and it was published in the Federal Register on March 10, 2021 postponing the effective date to April 21, 2021. Key FAA milestones include: Milestone 1: Developed an outreach and engagement plan to support the Remote ID roll out. Milestone 2: Developed a tactical communications plan. Milestone 3: Crafted a social media plan, which included promoting outreach material on the new website, as well as socializing information through Facebook, Twitter, and Instagram posts. Milestone 4: Hosted 34 informational sessions and webinars for domestic and international stakeholders. Milestone 5: Developed and distributed internally numerous educational materials on Remote ID rule to employees via broadcast email messages and targeted correspondence. Milestone 6: Created a consistent message about the rule to internal and external stakeholders, including recreational flyers and commercial UAS pilots, standards bodies, governmental agencies, and more.
Public Benefit	Remote ID helps the FAA, law enforcement, and other federal agencies find the control station when a drone appears to be flying in an unsafe manner or in a restricted area. Remote ID also lays the foundation for the safety and security groundwork needed for more complex drone operations.

On January 15, 2021, the FAA successfully published the Remote ID rule with an original effective date of March 16, 2021. Corrections were made to the rule and published in the Federal Register on March 10, 2021, delaying the effective date to April 21, 2021. The final rule on Remote ID requires most drones operating in U.S. airspace to have Remote ID capability. Remote ID provides information about drones in flight, such as the identity, location, and altitude of the drone and its control station or take-off location. Authorized individuals from public safety organizations may request identity of the drone's owner from the FAA. The FAA is facilitating early adoption of Remote ID technology by conducting outreach and engagement activities across the agency and throughout the country.

The Remote ID rule, as originally proposed, was controversial within the recreational flying community. The Notice of Proposed Rulemaking garnered over 53,000 public comments and resulted in the FAA amending its proposal. To communicate how the final rule changed from the proposed rule and the impact that would have on stakeholders, FAA formed a stakeholder engagement team of international and operational experts to develop and provide briefings on the rule. We also provided plain-language updates targeted to public safety networks.

Since adoption of the final rule, the FAA has hosted 34 informational sessions and webinars for domestic and international stakeholders. Attendees included international civil aviation authorities, public safety organizations, airlines, state aviation and airport authorities, and industry. We also held two YouTube sessions on Remote ID and the Operation of Unmanned Aircraft Systems Over People rule aimed at helping recreational and commercial UAS flyers better understand the rules. We have also updated our internal employee sites to reflect the change in the rule while providing educational materials for FAA employees. Finally, to ensure a consistent message about the rule, FAA continues to work closely with law enforcement agencies to ensure they receive accurate messaging about the rule and their rights and obligations. To see the full extent of FAA outreach efforts, check out: ***www.faa.gov/uas***.

In support of the development of the Remote ID capability, the FAA issued a Request for Information (RFI) that seeks

participation from the low-altitude manned-aviation community (agriculture operators and helicopters) in developing remote identification information technology applications. Issuance of the RFI was one of the integral steps towards the development of the remote identification framework. When used in tandem with new technologies and infrastructure, this framework will facilitate more advanced operational capabilities, such as detect-and-avoid and aircraft-to-aircraft communications, that support beyond visual line-of-sight operations. The information collected also assists in developing the necessary elements for comprehensive UAS traffic management.

In addition, on October 22, 2020, the FAA tasked the Drone Advisory Committee (DAC) to engage with operators in low altitude airspace to obtain feedback on how Remote ID might be used to increase situational awareness. The DAC delivered a recommendation report based on this work to the FAA on June 23, 2021. The full report can be found in the June 23, 2021 DAC meeting eBook link found here: ***https://www.faa.gov/uas/programs_partnerships/drone_advisory_committee/***.

A compilation of various models of drones.

PEOPLE

Strengthen our current and future aviation workforce by holding ourselves accountable, developing our people and planning for the aviation workforce of the future.

Performance Measure	Org.	FY 2018 Results	FY 2019 Results	FY 2020 Results	FY 2021 Target	FY 2021 Results	FY 2021 Status
FAA Corporate Diversity and Inclusion Strategic Plan Develop and design a Five-Year Diversity and Inclusion Strategic Plan that will provide relevant, strategies, goals, and tools needed to create an inclusive, discrimination-free workplace where all employees will have the opportunity to reach their full potential.	ACR/ AHR	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet two targets	Met two targets	✓
FAA National Science, Technology, Engineering, and Math (STEM) Aviation and Space Education (AVSED) Program Governance Structure Fully implement the cross-agency STEM AVSED governance structure, to include the STEM AVSED Executive Board, and the STEM AVSED Steering Committee.	APL	Updated Measure for FY 2021	Updated Measure for FY 2021	Updated Measure for FY 2021	Meet all three targets	Met three targets	✓

✓ Target met ✗ Target not met

FAA Corporate Diversity and Inclusion Strategic Plan

The FAA developed and designed a Five-Year Diversity and Inclusion Strategic Plan that will provide relevant strategies, goals, and tools needed to create an inclusive, discrimination-free workplace where all employees have the opportunity to reach his or her full potential.	
FY 2021 Target	Target 1: Complete the Diversity and Inclusion Strategic Plan and send to the FAA Administrator's Office for final approval and signature by December 9, 2020. Target 2: Market and provide awareness to FAA employees about the Diversity and Inclusion Strategic Plan by conducting six webinar and informational sessions throughout FY 2021 by June 30, 2021.
FY 2021 Result	Target 1: FAA Administrator signed the Diversity and Inclusion Strategic Plan on December 9, 2020. Target 2: Conducted six webinars and informational sessions by June 30, 2021.
Public Benefit	The agency as a whole is stronger, more innovative, and more successful when all talents, backgrounds, and experiences are included and utilized for achieving aviation safety. Additionally, the implementation of this plan will ensure an understanding of the importance of diversity and inclusion to all FAA employees for the benefit of the flying public and aviation sector.

The Department of Transportation (DOT) and the FAA all are placing a high priority on creating diverse and inclusive workforces. To advance this priority, the FAA created a Diversity and Inclusion Strategic Plan for the agency in FY 2021.

The Diversity and Inclusion Strategic Plan (for Fiscal Years 2021–2025) is a collaborative joint effort developed by FAA's Office of Civil Rights and Office of Human Resources. The plan was circulated throughout the agency, to employee associations and program managers, and to special emphasis groups such as People with Disabilities, the Federal Women's Program, and the Hispanic Employment Program, with the goal of ensuring complete transparency and demonstrating the integration of all viewpoints and perspectives in successfully driving organizational diversity and inclusion within the FAA. Numerous comments, edits, and suggestions were considered from across the agency. The Plan was approved and signed by the FAA Administrator on December 9, 2020.

The Diversity and Inclusion Strategic Plan includes the following strategic goals:

- Demonstrate FAA leadership's commitment to diversity and inclusion
- Cultivate an inclusive workplace culture that emphasizes respect
- Attain and retain a diverse and highly skilled workforce

During FY 2021, the FAA conducted six webinars to promote leadership, commitment, and accountability for modeling behavior that advances diversity, equity, and inclusion. FAA continues to work with the DOT, FAA employees, labor groups, special emphasis program managers, and others to identify implementation strategies for the Diversity and Inclusion Strategic Plan. The approval and implementation of the plan demonstrates the FAA's commitment to making diversity and inclusion a top priority essential to the FAA's mission, core activities, and business practices. For more information, see the Office of Civil Rights website: ***https://www.faa.gov/about/office_org/headquarters_offices/acr/***.

Employees working on commercial space launch activities at the Joint Space Operations Group room at the FAA's Command Center. FAA photo.

FAA National Science, Technology, Engineering, and Math (STEM) Aviation and Space Education (AVSED) Program Governance Structure

Fully implement the cross-agency STEM AVSED governance structure, to include the STEM AVSED Executive Board (EB), and the STEM AVSED Steering Committee (SC).	
FY 2021 Target	Target 1: Identify committed members of the STEM AVSED EB and SC from all FAA organizations that are involved in STEM AVSED engagement initiatives by March 31, 2021. Target 2: Establish recurring meetings and develop charters for STEM AVSED EB and SC by June 30, 2021. Target 3: Implement oversight procedures for cross-agency STEM AVSED engagement initiatives, to include development of annual agency business plan goals and activities for FY 2022 and identification of resources to support those goals.
FY 2021 Result	Target 1: As of the end of March 2021, members from all FAA Lines of Business and Staff Offices were identified for participation in the EB and the SC. Target 2: Recurring meetings were scheduled through the end of FY 2021 and charters were finalized. Target 3: The SC developed draft activities for FY 2022 and presented them to the EB in August 2021. These activities were incorporated into annual agency business plans.
Public Benefit	The FAA is tackling the growing aviation employee shortage by ensuring a consistent pipeline of skilled aerospace professionals into the workforce, thereby securing a robust U.S. aviation industry into the future.

The STEM AVSED Program is an integral part of the FAA's outreach to the public. In light of the forecasted growth in aviation jobs, as well as the number of aviation employees reaching retirement age, there is a need to expand our outreach to today's students—as many are unaware of aviation as a feasible career path. In addition to the AVSED program, FAA will be collaborating with industry, academia, and other government agencies to address any current or future needs in the aviation workforce.

In FY 2021, the STEM AVSED program was moved from Human Resource Management to the Office of National Engagement and Regional Administration within the Office of Policy, International Affairs and Environment. This shift reflects the program's national reach and desire for more regional engagement. The FAA's goal is to prepare and inspire the next generation of skilled professionals for the aviation and aerospace workforce pulling from STEM learning and occupational tracks, at the same time raising public awareness of FAA's mission to maintain the safest, most efficient aerospace system in the world. One of the four goals of the recently approved STEM AVSED Strategic Plan is to implement FAA STEM and AVSED education efforts on a national, regional, and local level through effective cross-agency collaboration. While many FAA organizations currently participate in various types of STEM engagement and outreach, they do so independently. Collaboration and awareness across all engaged STEM activities will allow for increased effectiveness in outreach efforts and improve focus on the overall strategic goals of the program.

In early 2021, National Engagement and Regional Administration worked to identify appropriate members at both the managerial and executive level to make up the STEM AVSED Executive Board (EB) and Steering Committee (SC). The Executive Board serves as the governance and coordination body for all FAA STEM AVSED engagement initiatives. In addition, the EB will work cooperatively to establish, ensure, and maintain adequate resources and develop strategy for the National STEM AVSED program.

The SC is made up of representatives from each FAA Line of Business and Staff Office, including representatives from the FAA William J. Hughes Technical Center and Mike Monroney Aeronautical Center, as well as a representative from the FAA's National Employee Forum. The EB and SC held a joint kickoff meeting in June 2021. Since that time, the SC has met four times. The main focus areas of the SC meetings to date have been to establish the charter and norms of the group and to enable the collection of data on all STEM AVSED-related activities conducted throughout the FAA in FY 2021. Members of both bodies signed their respective charters in August 2021.

The SC developed the draft activities and targets for FY 2022 and presented them to the EB on August 25, 2021. These activities will be included in business plans throughout the agency in support of the FAA STEM AVSED Strategic Plan.

GLOBAL LEADERSHIP

Advance global aviation safety, operational excellence, and innovation by leading and collaborating with aviation authorities globally.

Performance Measure	Org.	FY 2018 Results	FY 2019 Results	FY 2020 Results	FY 2021 Target	FY 2021 Results	FY 2021 Status
Implement FAA International Strategy and Enhance International Civil Aviation Organization (ICAO) Work Contribute to the development of the U.S. government position regarding the ICAO Secretary General Election in March 2021 and qualified U.S. citizens for ICAO's senior technical and regional positions in order to have a direct and continuous influence at the U.N. technical agency.	APL	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet all three targets	Met three targets	✓
Promote International Safety and U.S. Interests Influence the development of international approaches to ensure the safe and sustainable recovery of the aviation sector after the global health emergency.	APL	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet two targets	Met two targets	✓

✓ Target met ✗ Target not met

Implement FAA International Strategy and Enhance International Civil Aviation Organization (ICAO) Work

Implement FAA international strategies and enhance International Civil Aviation Organization (ICAO) work. Contribute to the development of the U.S. government's position for the ICAO secretary general election in March 2021 and proactively identify qualified U.S. citizens for ICAO's senior technical and regional positions in order to have a direct and continuous influence at the United Nations' (UN) technical agency.	
FY 2021 Target	Target 1: Evaluate each secretary general candidate's technical capabilities and familiarity with managing complex civil aviation matters, and provide FAA's recommendations to the Department of State (DOS). Target 2: Conduct outreach to states and regional organizations in support of U.S. government positions for the secretary general election. Target 3: Establish an ICAO succession planning strategy to identify and support highly qualified U.S. candidates for selected ICAO director-level positions that have a direct impact on FAA's strategic priorities.
FY 2021 Result	Target 1: The FAA evaluated the technical capabilities of each secretary general candidate and submitted its recommendations to the DOS. Target 2: The FAA supported DOS outreach with key states and organizations to convey secretary general qualifications as laid out in a DOS cable on August 2020. Target 3: The FAA developed an ICAO succession planning strategy that identifies and supports highly qualified U.S. candidates for selected ICAO director-level positions having a direct impact on the FAA's strategic priorities.
Public Benefit	U.S. citizens flying internationally will benefit from ICAO standards affecting the safety, security, efficiency, and sustainability of airlines and their supporting organizations worldwide. The United States will benefit by ensuring the U.S. aerospace industry will be able to operate seamlessly and compete on a level playing field with international competitors.

The ICAO Secretary General Election

ICAO is a specialized agency of the UN and is recognized as the global standard-setting organization for the civil aviation community. ICAO not only guides the regulatory decisions of its 193 Member States, it also provides the technical and diplomatic framework needed to debate and resolve the challenges involved in promoting safe and efficient air travel across the globe.

The FAA plays a critical leadership role at every level of ICAO's standards-setting process. This includes providing subject matter experts for ICAO panels, committees, task forces, and advisory groups. The FAA also provides a participant to the Air Navigation Commission (ICAO's technical body), which helps to ensure the technical excellence of ICAO's work, as well as the efficacy of the standards it promulgates.

In February 2021, the ICAO Council elected a new secretary general. Given the devastating impact of the COVID-19 pandemic on global aviation, the new secretary general will play a critical role in the recovery of the global aviation sector.

In preparation for this important election, a U.S. government interagency team led by the FAA and the DOS initiated a process to identify the candidate who best supported U.S. aviation interests. On August 27, 2020, the DOS performed a global outreach to key states and organizations outlining expected qualifications, experiences, and characteristics that the U.S. considered essential for any competitive candidate. The FAA interviewed all five candidates and presented its views during an interagency meeting led by the DOS. The U.S. Interagency Election Team, guided by the DOS, last convened on October 9, 2020. The team endorsed the current direction laid out by the DOS, a decision that, as a matter of policy, the U.S. does not disclose.

ICAO Director-Level Positions

The U.S has historically occupied two critical ICAO posts. The posting of U.S. candidates is critical in helping the U.S. promote its leadership in the region and globally. For both vacancies, the ICAO Council will play a central role in selecting the candidate. The FAA has identified and is currently supporting highly qualified U.S. candidates for selected ICAO positions that have a direct impact on FAA's strategic priorities by preparing them professionally to meet the selection challenges.

Promote International Safety and U.S. Interests

Influence the development of international approaches to ensure the safe and sustainable recovery of the aviation sector after the global health emergency.	
FY 2021 Target	Target 1: Develop global pandemic risk mitigation measures for passengers and aviation professionals in alignment with U.S. best practices through the International Civil Aviation Organization's (ICAO) Council Aviation Recovery Task Force (CART). Target 2: Develop, maintain, and actively promote an FAA policy position in support of CART implementation measures in at least three bilateral and multilateral venues to include ICAO regional engagement.
FY 2021 Result	Target 1: The FAA supported the ICAO CART leading to the development of global pandemic risk mitigation measures. Target 2: The FAA advanced its positions through its direct participation in ICAO's Ad Hoc Small Group on the High Level Conference on COVID-19 (HLCC), the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA), and the CART Technical Working Group.
Public Benefit	The development and maintenance of pandemic response measures throughout the global aviation system reduces the risk of COVID transmission among passengers, crews, and aviation workers while allowing a critical sector of the U.S. economy and provider of U.S. jobs to recover. These measures also allow the public access to air travel while reducing the risk of the translocation of the COVID virus between and within countries, slowing the global spread of the virus while allowing air travel to continue.

ICAO is an agency of the United Nations recognized as the global standard-setting organization for the civil aviation community. ICAO not only guides the regulatory decisions of its 193 Member States, it also provides the technical and diplomatic framework needed to debate and resolve the challenges involved in promoting safe and efficient air travel across the globe.

Target 1: ICAO Council Aviation Recovery Task Force (CART)

Phase I (March–June 2020)

The ICAO Council is ICAO's permanent governing body. It is comprised of representatives from 36 Member States, and has non-voting observers, representatives of most international trade and advocacy organizations. In response to the COVID-19 pandemic, ICAO Council created the CART. The ICAO Council directed the CART to "facilitate the restart of aviation operations in a sustainable, safe, secure, and orderly manner as soon as practicable, taking into consideration the evolution of the COVID-19 pandemic and decisions by international and national public health authorities."

The CART has also worked closely with the World Health Organization and other health organizations via the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation to develop risk mitigation measures and recommendations for passengers and aviation professionals in order to bring aviation operations back to pre-pandemic levels.

The U.S. has been closely involved in the work of CART, contributing to the high-level CART report, as well as drafting mitigating measures and more in-depth guidance materials. The final CART report highlighted both the support ICAO has given to Member States, along with the regulatory alleviation measures ICAO helped coordinate with regulators throughout the world. The inclusion of this information is important, as it will help serve as a guide for responding to similar emergencies in the future, should they occur.

Phase II (June 2020–January 2021)

The work of the ICAO CART did not stop with the publication of the first set of measures. As this pandemic and the global response to it evolves, so too do the measures needed to effectively manage the challenges ahead. Elements that were critical in the early stages need to be amended, eliminated, or replaced by new procedures based on the evolving operational experience. As the second round of CART policy-making activities began, the Council's and industry's attention had also turned toward addressing other aviation segments in need of guidance. These include business and general aviation and air traffic control. In addition, ICAO and the medical community explored addressing mental health concerns that may impact flight and ground crews as they resume their duties during these unusually stressful times.

CART Phase II emphasized public health risk management, testing regimes, and quarantine protocols. The ICAO Council approved the CART Phase II report and updated the Take-Off Guidance Document on November 9, 2020 to include COVID-19 policies. The revision of the document Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis, is available at: ***https://www.icao.int/covid/cart/Pages/default.aspx***.

Phase III (January 2021–March 2021)

CART Phase III began on January 19, 2021 and targeted issues related to COVID-19 testing and vaccination of passengers

as part of a Member State multilayer risk management strategy. CART also considered the position of the World Health Organization that advised that national authorities and conveyance operators should not require proof of COVID-19 vaccination for international travel as a condition for departure or entry.

On March 12, 2021, the ICAO Council approved the CART Phase III High Level Cover Document, the updated Take-Off Guidance Document, and the updated Testing and Cross-Border Risk Mitigation Measures Manual (Document 10152).

Target 2: Promote FAA policy in support of CART implementation measures.

The FAA supported the development and publication of CART guidance documents that serve as a global benchmark for testing protocols, and reflect policies and recommendations championed by the FAA. The FAA advanced these positions through its direct participation in ICAO's Ad Hoc Small Group on the High Level Conference on COVID-19 (HLCC), the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA), and the CART Technical Working Group.

Upon completion of CART Phase III in March 2021, the FAA continued to support the HLCC, which was held in October 2021.

On June 28, 2021, the CART Technical Working Group met. During this meeting, updates were provided by CAPSCA, the European Union Aviation Safety Agency, and ICAO on vaccination performance, visible digital seals, and health certificates. CAPSCA is currently reviewing existing CART guidance material to determine if updates should be made to any of the 20 recommendations. Once CAPSCA has completed this review, proposed updates/revisions to CART Recommendations and the Testing and Cross-Border Risk Mitigation Measures Manual (Document 10152) will be circulated to the CART Technical Working Group for review/approval prior to being submitted to ICAO Council for official approval.

The FAA continues to support activities related to CART and HLCC. FAA participation in these groups will be especially important as we prepare for the HLCC in October 2021 to shape the global aviation policy response to the pandemic.

Through its support in drafting of CART's global pandemic risk mitigation efforts, as well as its promotion of their adoption, the FAA contributes towards slowing the global spread of the COVID-19 virus.

Passengers boarding a commercial flight. Photo by Kiril Vasilev/Bigstock Images.

OPERATIONAL EXCELLENCE

Operate the world's most efficient aerospace system through daily execution, continuous improvement, and infrastructure investment.

Performance Measure	Org.	FY 2018 Results	FY 2019 Results	FY 2020 Results	FY 2021 Target	FY 2021 Results	FY 2021 Status
Major System Investments Ninety percent of major baselined acquisition programs must be maintained within ten percent of their current acquisition cost, schedule and performance baseline as of the end of FY 2021.	AFN	90.5%	75%	65%	90%	90.9%	✓
Unmodified Audit Opinion Obtain an unmodified audit opinion on the FAA's FY 2021 financial statements identified by external independent auditors.	AFN	Unmodified audit opinion w/no material weakness	Unmodified audit opinion w/no material weakness	Unmodified audit opinion	Unmodified audit opinion	Unmodified audit opinion	✓
Community Engagement Develop informational tools on FAA's efforts to safely and efficiently integrate new entrant vehicles to the national airspace, including Unmanned Aircraft Systems (UAS), Urban Air Mobility, and Commercial Space operations.	ATO	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet two targets	Met two targets	✓
Environmental Efficiency and Emissions Continue FAA leadership in improving environmental efficiency and addressing carbon emissions from aviation through domestic implementation of International Civil Aviation Organization (ICAO) airplane carbon dioxide standard and continued domestic implementation of the Carbon Offsetting and Reduction Scheme for International Aviation.	APL	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Submit data to ICAO	Data submitted	✓
NextGen Advisory Committee Commitments Achieve 80 percent of NextGen Advisory Committee NextGen Priorities Joint Implementation Plan commitments, excluding industry-controlled milestones, within a calendar quarter of their scheduled dates and within 10 percent of the planned cost.	ANG	91.3%	97.5%	100%	80%	100%	✓
Return of our aviation system post COVID impacts Sustain and improve critical FAA cross-cutting support functions in response to a global pandemic.	ASH	New Measure for FY 2021	New Measure for FY 2021	New Measure for FY 2021	Meet all three targets	Met three targets	✓
Address 80 percent of Internet Accessible High-Value Assets with Critical and High Vulnerabilities Address 80 percent of the FAA's Internet accessible high value assets with critical and high vulnerabilities in accordance with Department of Homeland Security's Binding Operational Directive 19-02. Provide monthly updates to the Cybersecurity Steering Committee.	AFN	Updated Measure for FY 2021	Updated Measure for FY 2021	Updated Measure for FY 2021	80%	100%	✓
Integrate Commercial Space Transportation into the National Airspace System* Develop and implement Time-Based Launch/Reentry Procedures and Dynamic Launch and Reentry Windows for integrating complex commercial space launch and reentry operations into the national airspace system.	ATO	New Measure for FY 2020	New Measure for FY 2020	Developed two procedures	Implement procedures at two sites	Procedures implemented at two sites	✓

* This performance measure supports a DOT Agency Priority Goal.

✓ Target met ✗ Target not met

Major System Investments

FY 2021 Target	Ninety percent of major baselined acquisition programs must be maintained within 10 percent of their current acquisition cost, schedule, and performance baseline as of the end of FY 2021.
FY 2021 Result	**90.9 percent** of major baselined acquisition programs were maintained within 10 percent of their current acquisition cost.
Public Benefit	The FAA's ability to keep acquisitions within budget and on schedule will allow for a timely transition of NextGen programs and other new programs. The transition to NextGen and other new programs involves acquiring numerous systems to support precision satellite navigation; digital, networked communications; integrated weather information; layered, adaptive security; and more.

The FAA's ability to manage investments in an efficient and cost-effective manner is critical to the implementation of NextGen programs. For this reason, the FAA established a performance measure that tracks the agency's success in maintaining its cost, schedule, and performance baselines with regard to Major System Investments. The FAA defines Major System Investments as capital programs typically classified in Acquisition Categories that have an aggregate rating of medium or high in the following areas:

- Complexity
- Risk
- Political sensitivity
- Safety
- Security or cost
- Requiring of special management attention because of importance to the mission of the FAA
- Significant program or policy implications
- Executive visibility
- High developmental costs

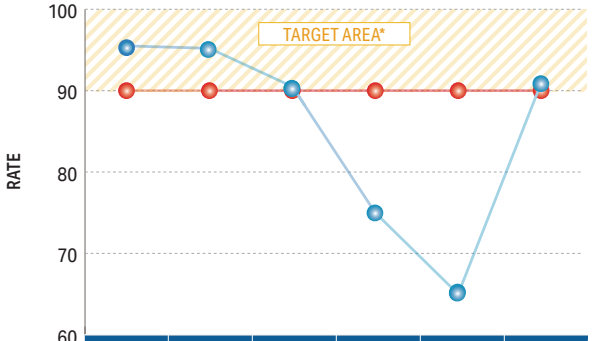
The FAA tracks and reports the status of each program's acquisition program baseline using an automated database. The data is used to convey program status and performance information to senior executives for purposes of program performance reporting, periodic reviews, and decision-making.

The target for each year has been to keep 90 percent of these major acquisition programs within a 10 percent variance of their cost, schedule, and performance goals. Up until 2019, the FAA had met this goal every year since its inception in FY 2012. However, in FY 2019, the FAA did not achieve the target due to the month-long government shutdown. In FY 2020, the FAA did not achieve the 90 percent target because of restrictions to FAA's work activities on these programs due to the COVID-19 pandemic.

Once a milestone is missed, it is removed from the metric until the program has new cost, schedule, and performance goals.

MAJOR SYSTEM INVESTMENTS

Percent of major baselined acquisition programs within 10 percent of their current acquisition cost, schedule and technical performance



	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Actual	95.5	95.2	90.5	75.0	65.0	90.9
Target	90.0	90.0	90.0	90.0	90.0	90.0
Target Achieved?	✓	✓	✓	✗	✗	✓

Since programs generally do not recover from such significant delays in either cost or schedule, new goals are often necessary in order to meaningfully measure program progress. As a result, the FAA is now tracking 11 programs, as opposed to the 20 programs tracked in FY 2020. This means failure in any individual program will have a much greater impact on the metric as a whole. As long as the COVID-19 restrictions continue, this metric will continue to present challenges for the FAA.

In an effort to make progress on major systems while dealing with the uncertainty around when operations will return to normal, the FAA was able to mitigate some risks through virtual/remote access to facilities and modifying program schedules to conduct work that did not require traveling. As some restrictions eased in FY 2021, FAA was able to continue to make progress on programs.

As a result, one out of the 11 programs tracked for this metric has exceeded the 10 percent threshold—Aerospace Medicine Safety Information System Phase 1. This program has projected

Rendering of the new Teterboro Tower in New Jersey. The tower is currently under construction with an anticipated completion date in FY 2023. Rendering provided by Archer Western.

a schedule delay of 12 months (23.1 percent variance) and a projected cost increase of $41.9 million (49.1 percent variance). The schedule and cost variances are due to performance issues with the prime vendor, including delays in software development and delays in hiring personnel. In addition, emerging complexity in requirements, delays in provisioning government-furnished equipment and information, and the COVID-19 pandemic have impacted the program.

The FAA will continue to implement standard best practices for managing its programs. The FAA's investment-decision-making body, the Joint Resources Council, provides oversight of acquisition programs through quarterly reviews to oversee program costs, schedules, and performance goals. They may take action to address issues and provide guidance and direction to acquisition programs as necessary. These may include reviewing and approving program mitigation strategies to minimize or eliminate further issues.

Reporting this performance measure ensures consistency with the Air Traffic Management System Performance Improvement Act of 1996. This Act requires the FAA Administrator to terminate programs funded from the FAA's Facilities and Equipment budget account that are more than 50 percent over their budget, schedule, or performance goals, unless the Administrator determines that termination would be inconsistent with keeping safe and efficient the development or operation of the national airspace system. In addition, the law requires the FAA Administrator to consider terminating any substantial acquisition that is more than 10 percent over its budget, schedule, or performance goals.

Unmodified Audit Opinion

FY 2021 Target	Obtain an unmodified audit opinion on the agency's financial statements.
FY 2021 Result	Unmodified audit opinion on the agency's financial statements.
Public Benefit	The public benefits by being assured, confirmed by independent auditors, that the consolidated financial statements of the FAA are presented fairly in all material respects.

The unmodified audit opinion target is a critical indicator of the financial condition of the FAA because it independently assesses the fair presentation of the agency's financial statements. In connection with that process, the unmodified audit opinion considers the internal control over financial reporting and compliance with laws and regulations that could have a material impact on the financial statements.

In FY 2021, the FAA achieved this target by receiving an unmodified audit opinion on its consolidated financial statements. An unmodified audit opinion means that the financial statements are presented, in all material respects, in accordance with U.S. generally accepted accounting principles. Achieving this measure is a signal to the public and the U.S. Congress that the agency is transparent and accountable in its use of taxpayer resources. It requires every FAA organization to be responsible for following accounting policy by entering accurate and timely source data into the accounting system.

From the highest levels of the agency down, the financial statements audit is a priority. Executive-level leadership allocate resources where they are needed so that sound internal controls operate routinely and effectively, audit issues are resolved promptly, the integrity of data and business system operations are ensured, and ongoing performance is monitored. The strong emphasis on fiscal responsibility is the most significant factor contributing to the achievement of this measure.

Community Engagement

Develop a series of informational tools (presentations, talking points, infographics, webpages) that can be used by the FAA to educate and inform airport sponsors, community groups, and local elected officials.	
FY 2021 Target	Target 1: Work with the existing regional Community Engagement teams to develop informational tools on FAA's efforts to safely and efficiently integrate new entrants to the national airspace, including Unmanned Aircraft Systems, Urban Air Mobility, and Commercial Space operations. Target 2: Work with the existing regional Community Engagement teams to develop informational tools on the FAA's aircraft noise research programs, including efforts to better understand potential community impacts from aircraft noise and ways to address them.
FY 2021 Result	Target 1: The FAA developed high-level communication products across multiple lines of business, connecting staff offices and regional community engagement teams. Target 2: The FAA conducted a national webinar to provide additional detail and an opportunity to address questions on the FAA's noise research priorities. Multiple briefings on the noise research program were also provided in coordination with community meetings and FAA regional staff.
Public Benefit	Target 1: The public benefits from more thoughtful responses to frequently asked airspace questions, as well as early and consistent engagement with their communities. Target 2: The public benefits from opportunities to learn about and contribute to a national discussion on aircraft noise.

The FAA takes an active leadership role in balancing aviation safety, capacity, and efficiency with environmental concerns (such as noise and air quality). This includes working with aircraft manufacturers and others in reducing noise at the source through quieter aircraft engines and airframe design; noise abatement procedures (working to redirect flight-paths away from noise-sensitive areas when possible); and noise compatibility planning, which is a structured approach to collaboration between airports, airlines, communities, and the FAA.

The FAA seeks to engage with our stakeholders to address aviation noise challenges through noise research efforts focused in three core areas: studying the effect of aircraft noise on individuals and communities; developing tools to measure the level of aircraft noise, including models, metrics, and data visualizations; and researching effective ways to reduce or mitigate aircraft noise. Further detail summarizing these research topics was published in a Federal Register Notice on January 13, 2021, (86 FR 2722).[1]

Since 2016, the FAA has been working to further enhance standardized, scalable, and repeatable community engagement strategies and practices. This builds a robust framework that can inform new entrants on best practices for engagement. Our Community Engagement efforts are flexible based on the needs of the airport, project, and community. For example, we offered different solutions during discussions with Regan National Airport and the Community Roundtable in Washington, D.C. than we offered during our engagement efforts with the South-Central Florida Metroplex. These practices are captured in our guidance so they can be utilized for engagement by FAA regional teams with new and different concerns. The use of best practices, accumulated experiences, and the alignment derived from the matrix team will form a good foundation for regional support for engaging stakeholders of new entrants to the airspace.

These strategies and priorities are currently being utilized in 35 ongoing roundtable discussions around the country. Roundtable discussions bring together members of the public, elected officials, and aviation industry representatives who meet and discuss airspace modernization projects, the expected benefits from them, and any potential impacts that could result from airspace actions.

The FAA recorded a virtual broadcast, both on Zoom and via FAA social media channels, to meet its second target. This broadcast creates an extended and recurring outreach to communities.

The lessons learned from developing these activities have been incorporated into formal training and guidance. The following is a sample:

- Community Engagement Training – developed for the Community Engagement Officers and suggested for all FAA personnel who interact with the public.

1 *https://www.federalregister.gov/documents/2021/01/13/2021-00564/overview-of-faa-aircraft-noise-policy-and-research-efforts-request-for-input-on-research-activities*

- Environmental Justice and Communication Training – the FAA office of Civil Rights provided training in two sessions with regular annual refresher training for the Community Engagement Officers and all FAA personnel who interact with the public.
- Presentation Training – geared to building effective presentations and communication skills training for Community Engagement Officers.
- Strategic Outreach Training – targeted training specifically to improve outreach communications

Additionally, the FAA provided a series of community briefings on the agency's noise research program, including a presentation of the results from the January 2021 release of the Neighborhood Environmental Survey on community annoyance from aircraft noise exposure. Detailed briefings and live questions and answers sessions were conducted at over 35 community roundtables. The FAA also hosted a national webinar on February 22, 2021, providing the public with a comprehensive overview of the agency noise research programs.

FAA understands the responsibility and value of engaging with the communities surrounding airports, flight paths, and launch sites. As more entrants seek to use our airspace, community engagement becomes even more important and the FAA will be prepared by using lessons learned, best practices, and the tools described here to meet that challenge.

It's not an exaggeration to say that when many **Alaskans** go to the grocery store, they are actually going to the local airport. In a state where more than 80 percent of communities are accessible only by air, aviation is the daily backbone of commerce.

See how the FAA is increasing aviation safety in Alaska, here: **https://medium.com/faa/how-the-faa-is-increasing-aviation-safety-in-a-state-like-no-other-alaska-c7e23a2fbbca**.

General aviation aircraft at Wasilla Airport in Alaska. Photo by Tremayne Cobb.

Environmental Efficiency and Emissions

Continue FAA leadership in improving environmental efficiency and addressing carbon emissions from aviation through domestic implementation of the International Civil Aviation Organization (ICAO) airplane carbon dioxide standard and continued domestic implementation of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).	
FY 2021 Target	Submit monitoring, reporting, and verification information for 2019 emissions from U.S. operators to ICAO in accordance with the FAA CORSIA Monitoring, Reporting, and Verification Program.
FY 2021 Result	Data Submitted to ICAO on October 30, 2020.
Public Benefit	Communities benefit from coordinated efforts to minimize and mitigate environmental effects.

In October 2016, after years of negotiations, all ICAO Member States reached agreement on a global market-based measure to address carbon dioxide emissions from international aviation, referred to as the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). The agreement fulfilled congressional direction by creating a global approach on aircraft emissions. It also garnered widespread industry support by establishing a single measure for international flights, as opposed to a growing patchwork of carbon taxes and charges applied unilaterally to international aviation. In the simplest terms, CORSIA will require aircraft operators to reduce their emissions or purchase emissions offsets for their international carbon dioxide emissions above a defined baseline.

The FAA has initiated domestic implementation of CORSIA with a voluntary program for the Monitoring, Reporting, and Verification (MRV) requirements of CORSIA. The program fulfills the responsibilities of the United States under the Chicago Convention to implement the ICAO Standards and Recommended Practices for the MRV of carbon dioxide emissions from international flights as part of CORSIA. The annual CORSIA emissions report is an aggregation of verified, monitored international emissions from U.S. operators that FAA transmits directly to ICAO.

Under the FAA CORSIA MRV Program, U.S. operators are encouraged to voluntarily provide MRV data to FAA as participants in the program. As of August 2021, operators representing more than 98 percent of international carbon dioxide emissions from the U.S. have volunteered to participate in the program. As participants, these operators monitor the fuel use on a flight-by-flight basis. The operators compile this flight-level data and then work with a third-party verifier to confirm the accuracy of this information before transmitting the data to FAA for a final review and approval. For those operators who do not participate in the program, FAA estimates annual emissions based on fuel use data submitted to the Department of Transportation's Bureau of Transportation Statistics.

FY 2019 was the first year of the FAA CORSIA MRV program, and despite the ongoing global pandemic, operators were able to complete the necessary steps in a timely manner and provide accurate data to FAA. FAA carefully reviewed each report that was submitted before anonymizing and aggregating the detailed information and uploading the aggregated data to ICAO's secure database as the U.S. submission on October 30, 2020.

For more information on the FAA CORSIA MRV Program, please visit: ***https://www.faa.gov/about/office_org/headquarters_offices/apl/research/environmental_policy/***.

NextGen Advisory Committee Commitments

FY 2021 Target	Achieve eighty (80) percent of NextGen Advisory Committee (NAC) NextGen Priorities Joint Implementation Plan commitments, excluding industry-controlled milestones, within a calendar quarter of their scheduled dates and within 10 percent of the planned cost.
FY 2021 Result	Achieved 100 percent of NAC NextGen Priorities Joint Implementation Plan commitments.
Public Benefit	Capabilities identified by the NextGen Advisory Committee as "high priority, high readiness" bring tangible, near-term benefits to users of the national airspace. NextGen is the modernization of the way airplanes are organized for flying in the air and taxiing on the ground, all with the goal of making flying even safer, more efficient (getting to the destination faster using less fuel), and more predictable (more on-time arrivals and departures). The public will reap the benefits from NextGen implementation by having an improved flying experience that has less impact on our environment.

The NextGen Advisory Committee (NAC) NextGen Priorities Joint Implementation Plan outlines a number of high-priority NextGen capabilities that will provide significant near-term benefits to users of the national airspace. The plan is updated every year and includes a three-year window of joint implementation planning, implementation, and industry commitments. The most recent plan covers the 2019–2021 period and can be found at: ***https://www.faa.gov/about/office_org/headquarters_offices/ang/nac/media/NAC_NextGen_Priorities_Joint_Implementation_Plan_CY2019-2022_2021_Update.pdf***.

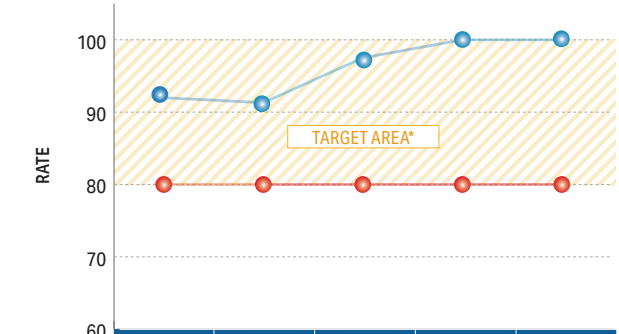
As a result of pandemic disruptions, the FAA announced a one-year extension of the current NextGen Priorities Joint Implementation Plan at the November 2020 NAC meeting. This extension allowed the FAA to reschedule some of the agreed upon milestones into 2022. The pandemic greatly impacted our implementation of NextGen milestones in 2021. For example, the metric for 2021 encompassed just seven milestones, whereas the 2020 metric included 35 milestones. Despite these delays, the FAA remains committed to the successful implementation of all the milestones that were jointly agreed to with NAC stakeholders.

Travel to FAA facilities has continued to be restricted due to the pandemic, which prevented hardware implementation, operational testing, and training on new systems. Despite these challenges, the FAA and industry has made significant progress on NextGen implementation. To date, the FAA has completed six of the FY 2021 NextGen Priorities Joint Implementation Plan milestones on time, surpassing the target for the year by delivering 100 percent across the five focus areas: Multiple Runway Operations, Data Communication, Performance-Based Navigation, Surface and Data Sharing, and the Northeast Corridor.

A key part of the Surface and Data sharing focus area is the Terminal Flight Data Manager (TFDM) program. This program will facilitate greater sharing of air traffic management system information such as airport operational status, flight data, and national airspace system restrictions.

NEXTGEN JOINT IMPLEMENTATION PLAN RECOMMENDATIONS

Percent of commitments achieved within schedule and cost parameters



	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Actual	92.0	91.3	97.5	100.0	100.0
Target	80.0	80.0	80.0	80.0	80.0
Target Achieved?	✓	✓	✓	✓	✓

The FAA developed a new remote access capability to the Technical Center laboratory. This new remote testing capability enabled the TFDM program to continue software testing of the system despite restrictions on travel due to the pandemic. The remote software testing continues the progress toward TFDM commitments to deliver initial software to Phoenix Sky Harbor Airport in Arizona. In parallel, the TFDM program continued the development of the next phase in TFDM software. An initial version of this software was delivered to the FAA in January 2021. This software development continues the progress toward TFDM commitments to deliver the next phase of the software to Charlotte-Douglas International Airport in North Carolina.

Delivering NextGen Capabilities

	Past Practices	NextGen Capabilities
 Communications	Controllers communicate only by voice to each individual aircraft.	In addition to voice communications, controllers communicate via computer (digital messages) to multiple aircraft at a time, which increases efficiency and improves safety by reducing misunderstandings.
 Aircraft Routes	Flight paths are limited by reliance on ground-based navigation infrastructure.	Aircraft can follow more efficient flight paths that use GPS navigation, reducing delays, fuel burn, and carbon emissions.
 Aircraft Spacing	Controllers manage air traffic by maintaining specific distances between aircraft.	Controllers can strategically manage the flow of air traffic using the expected position of aircraft throughout intended flight paths, improving the safety and efficiency of the national airspace.
 Information	Air traffic controllers and users of the national airspace (such as commercial airlines) do not have access to the same information to inform their decisions.	Information (including weather and flight status) is shared between the FAA and the users of the national airspace, allowing collaborative decision-making and improving the efficiency and predictability of the flow of air traffic.

Return of Our Aviation System Post COVID Impacts

Sustain and improve critical FAA cross-cutting support functions in response to a global pandemic.	
FY 2021 Target	Target 1: Identify key FAA crosscutting functions, challenges, and opportunities, especially those requiring collaboration across the agency. Target 2: Develop lessons learned, processes, and mechanisms to encourage best practices. Target 3: Develop a strategy to enhance crosscutting support functions in order to enable FAA safety and efficiency operations to remain intact in case of another global pandemic.
FY 2021 Result	Target 1: Identified key FAA crosscutting functions, challenges, and opportunities. Target 2: FAA developed, and continues to identify, best practices. Target 3: Drafted a Pandemic Response Strategy.
Public Benefit	An FAA Pandemic Response Strategy will provide FAA leadership with a focused plan to address future pandemics.

The COVID-19 pandemic has presented unique challenges to almost every organization, including the FAA. The FAA has adjusted its operations to continue supporting U.S. civil aviation and protect the safety of air transportation. This past year, the FAA has assessed our impacts, opportunities, and costs resulting from our response to the stressed aviation system caused by the global COVID-19 pandemic. This comprehensive assessment is crucial for the FAA to continue to effectively adapt to the ongoing pandemic and to develop a strategy to prepare for future pandemics.

In 2021, the FAA successfully completed three activities to capture, measure, sustain, and improve the FAA's response to the global pandemic. The first activity identified the specific impacts of the initial pandemic response and cataloged the actions needed to achieve mission success under these stressed conditions, both internally and in support of the aviation and space transportation systems. This activity sought to identify the issues and opportunities uncovered in an uncertain environment, and to provide a forum to distill the most effective contributions to our current operations and our eventual recovery. The second activity was an agency-wide effort to capture the lessons learned after eighteen months of pandemic operations and to compile them into an integrated, useful tool. Finally, the third activity developed an updated pandemic response strategy to incorporate into future operations and planning.

Identify key FAA crosscutting functions, challenges, and opportunities, especially those requiring collaboration across the agency. As conditions across the globe worsened, a Crisis Response Working Group (CRWG) was convened comprised of Emergency Planners from across the FAA, including the regional offices. The CRWG began to map out the response for the FAA, with Emergency Planners serving as conduits for sharing their expertise, planning experience, communication and coordination of policies, updates, and evolving requirements with the rest of the agency.

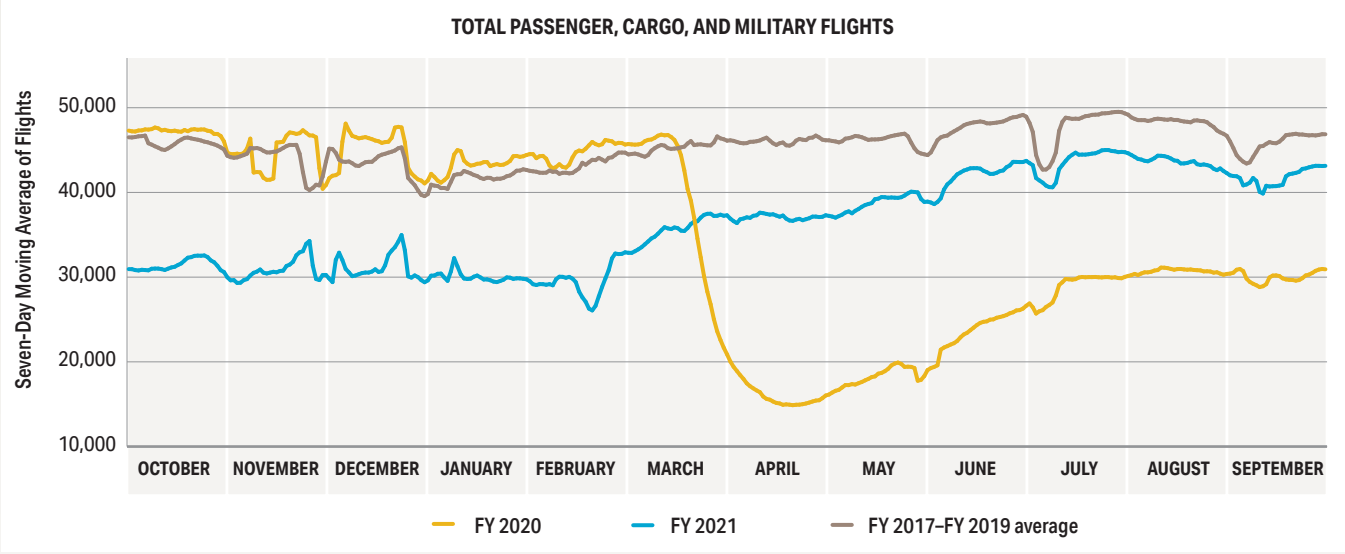
As the pandemic proved to be an enduring concern that demanded a more deliberate, long-term response, the FAA leadership chartered the COVID-19 Incident Management Team (IMT) as the dedicated focal point for COVID-19 issues. The IMT published situation reports for both internal and external consumption to ensure all stakeholders understood the status of FAA personnel, facilities, activities, and response efforts. These reports included the impact on domestic and international travel and the efforts and responses of international communities and countries.

Initial challenges to the IMT included representing and reconciling different challenges and solutions across different parts of the FAA, including its regional offices, and industry stakeholders. IMT members were able to represent their specific offices' concerns and bring those to the group for discussion and resolution. The result was a consistent approach to problem solving and policy development. In addition, external audiences understood the IMT to be the intake point for requests and inquiries of the FAA that allowed for a consistent and cohesive response.

Develop lessons learned, processes, and mechanisms to encourage best practices. The FAA is a data-driven learning organization. As such, the agency is dedicated to documenting lessons learned and successful procedures and implementing best-practices to continuously improve our operations and better fulfil our mission. As the pandemic began to retreat in the spring of 2021, the IMT organized an agency-wide effort to identify, collect, and catalog lessons learned during the course of the pandemic. Several hundred inputs were received identifying successes, shortcomings, and areas benefitting from policies and procedures in response to the pandemic. These collected inputs provided the basis for an updated agency pandemic response strategy.

Air Traffic Trends During the COVID-19 Pandemic

The COVID-19 pandemic has had a significant impact on the volume of air traffic in the United States, with the total number of flights (including passenger, cargo, and military flights) falling precipitously in the middle of FY 2020. While air traffic has been gradually recovering over the last 18 months, the volume of air traffic in FY 2021 is still below pre-pandemic levels. The graph below compares traffic levels for FY 2020 and FY 2021 to the average level over the FY 2017–2019 period.



The IMT utilized a process improvement cycle to complete their work. The group began by adopting existing best practices for incident response and management, such as responses to hurricanes and other weather events. Best practices included developing Situation Reports, holding group meetings, and leaning on emergency planners, all of which were learned from previous working groups. The IMT adopted these practices and expanded them. In an effort to address group bias, the IMT asked an outside expert to lead a lessons learned exercise and to provide recommendations for improvement. The IMT adopted those recommendations calling for tighter quality control processes and information flow. The IMT has just completed another round of collecting lessons learned and is in the process of implementing additional process improvements, this time, to include vaccination requirements and industry recovery processes.

Develop a strategy to enhance crosscutting support functions in order to enable FAA safety and efficiency operations to remain intact in case of another global pandemic. The FAA drafted a document that serves as the foundation for FAA's Pandemic Response Strategy; this living document provides a recommended series of specific actions tied to specific intervals in the Centers for Disease Control and Prevention pandemic identification and response structure. This document will more closely align our requirements and responses with other government departments and agencies to facilitate an effective response to safely, rapidly, and efficiently protect our personnel and respond to the needs of the aviation and space transportation sectors in a future pandemic situation.

As conditions continue to evolve, FAA will incorporate lessons learned and best practices from COVID-19 incident response and management into the Crisis Management Handbook and Continuity of Government processes. Complementing these actions, the Office of Aerospace Medicine will incorporate additional lessons learned and best practices to address the long-term response to pandemic or pandemic-like situations.

A coordinated strategy will provide FAA leadership with a means to address and remain focused during a future pandemic and more closely integrate our requirements with the national response. It also ties our overall pandemic response to any emerging strategy for recovery. We fully expect additional processes, procedures, and lessons to be guided by our collective experience because new requirements and responses arise on a daily basis.

Address 80 percent of Internet-Accessible High-Value Assets with Critical and High Vulnerabilities

FY 2021 Target	Address 80 percent of the FAA's internet-accessible high-value assets with critical and high vulnerabilities in accordance with Department of Homeland Security (DHS) and Binding Operational Directive 19-02. Provide monthly updates to the Cybersecurity Steering Committee.
FY 2021 Result	Addressed 100% of internet-accessible high-value assets with critical and high vulnerabilities in accordance with DHS Binding Operational Directive 19-02.
Public Benefit	The FAA is undertaking multiple strategic and tactical initiatives in the development of a comprehensive and strategic framework to reduce cybersecurity risks to the national airspace system, civil aviation, and agency information and information systems. Cybersecurity ensures the availability, integrity, and usability of information systems for the flying public.

The FAA plays a crucial role in safeguarding cybersecurity through management of the national airspace and other mission-critical systems for air transportation. Assuring that FAA information systems—both operational and administrative—are protected and secure reduces the risk of compromising aviation safety-related information and potential threat damage. Our national airspace system is a critical part of the national infrastructure and a key resource for which a cyber-attack could have economic, catastrophic, and national defense impacts, compromising the safety of the flying public and the international community.

As the FAA continues to increase the deployment of internet-accessible systems, it is more critical than ever to rapidly remediate vulnerabilities that otherwise could allow malicious actors to compromise federal networks through exploitable, external-facing systems. In accordance with the DHS Binding Operational Directive 19-02, DHS provides notification to the FAA of all critical and high vulnerabilities. Based on the industry-standard Common Vulnerability Scoring System, high vulnerabilities are those that receive a score between 7.0 and 9.0, while critical vulnerabilities receive a score greater than 9.0, with the score of 10 being the maximum. FAA prioritizes vulnerabilities in high-value assets, which are systems and services that have been deemed so critical that the loss or corruption of this information or loss of access to the system would have a serious impact on the organization's ability to perform its mission. High-value assets are based on FAA's Federal Information Security Management Act reportable system inventory. This performance target is a percentage that is calculated by comparing the total number of critical and high vulnerabilities identified on internet-accessible high-value assets that are addressed within the required timeframes to the total number of critical and high vulnerabilities identified on internet-accessible high-value assets.

In FY 2021, the FAA addressed 52 of the 52 (100 percent success rate) critical and high vulnerabilities identified on internet-accessible high-value assets within 15 or 30 days from initial detection. The revised metric target for FY 2021 calls out critical vulnerabilities and requires them to be remediated within a shorter timeframe than last year's 30 day timeline. It is consistent with DHS's Binding Operational Directive 19-02 that states:

- Critical vulnerabilities must be remediated within 15 calendar days of initial detection.
- High vulnerabilities must be remediated within 30 calendar days of initial detection.

The Security Operations Center 24 hour/365 days-a-year operation, is the central reporting point for all cyber events occurring within the FAA and Department of Transportation. The Security Operations Center detects threats, attacks, and weaknesses across all three FAA operating domains: Mission Support, National Air Space, and Research and Development.

FAA continues to enhance its external detection and protection mechanisms by deploying web application firewalls, cloud-based security access brokers, and critical scanning services to identify and remediate vulnerabilities in a more timely manner. In addition, deployment of new capabilities identified in Executive Order 14028, Improving the Nation's Cybersecurity, will further bolster the security posture of the FAA by increasing visibility and enhancing the Security Operations Center detection and response capabilities. To strengthen the U.S. civil aviation security posture, the FAA is leading an effort with private and public aviation entities to identify cybersecurity risks and develop mitigation strategies across the aviation ecosystem. This effort enables FAA and its stakeholders across the U.S. government (including the DHS and the Department of Defense), industry, and international partners to identify cybersecurity vulnerabilities and prevent cyber-attacks that could disrupt the safe and efficient operation of air travel.

Integrate Commercial Space Transportation into the National Airspace System

Develop and implement Time-Based Launch/Reentry Procedures (TBLP) and Dynamic Launch and Reentry Windows (DLRW) for integrating complex commercial space launch and reentry operations into the national airspace system.	
FY 2021 Target	Develop and implement TBL/DLRW procedures at two additional U.S. launch and reentry sites; further integrating commercial space launches and reentries into the national airspace system, using lessons learned in the FY 2020 Cape Canaveral Space Force Station/ Kennedy Space Center pilot project.
FY 2021 Result	Developed and implemented DLRW at launch sites in Boca Chica, TX, and Van Horn, TX.
Public Benefit	Fewer aircraft affected by commercial launches and reentries will result in reduced flight times and costs; improving overall efficiency as flight traffic increases in the national airspace system.

In April 2021, the FAA met its target of implementing Dynamic Launch and Reentry Windows (DLRW) procedures at launch sites in Van Horn, Texas and Boca Chica, Texas. DLRW procedures reduce the amount of time airspace is closed due to rocket launch and reentry activity.

DLRW continuously updates the amount of time airspace is locked down in preparation for a rocket launch and reentry by evaluating key mission events. If a launch is ahead of schedule, the airspace can be cleared earlier than planned. For example, the FAA will continuously communicate with the operator as they achieve mission milestones such as loading of propellants onto a rocket or rocket ignition. Thus, the FAA can actively adjust the time during which the airspace needs to be kept closed. Alternatively, Time-Based Launch/Reentry Procedures (TBLP) use existing technology to allow air traffic controllers to release aircraft from their departure points depending on how close they are to the hazard areas, earlier than with the prior model of holding all aircraft.

Historically, the Department of Defense (DoD) and the National Aeronautics and Space Administration (NASA) have managed launch and reentry operations out of federal ranges, land owned by the federal government and used for rocket launch activities, in support of DoD and civil government missions. The airspace required for these missions was also predominately managed by DoD and NASA. This airspace management structure led to a model in which launches and reentries were easily segregated from other airspace stakeholders.

With the proliferation of commercial launch and reentry operations, there is an increased emphasis on ensuring efficient launch and reentry operations to minimize disruptions to other airspace users. Collaboration with federal ranges, FAA air traffic facilities, and launch and reentry operators led to the development of TBLP and DLRW as a method for increasing efficiency and reducing delays associated with launch and reentry operations.

The FAA first developed and implemented TBLP and DLRW to better integrate complex commercial space launch and reentry operations at Cape Canaveral Space Force Station/ Kennedy Space Center into the national airspace. Based on this experience, the FAA developed and implemented DLRW at launch sites in Boca Chica, Texas, and Van Horn, Texas. DLRW procedures alone proved effective in reducing delays, making TBLPs unnecessary.

Aerial view of Spaceport America, "the world's first purpose-built commercial spaceport", designed and constructed specifically for commercial users, located in New Mexico. Photo courtesy of Spaceport America.

Quality Assurance

Verification and Validation of Performance Information

The FAA employs strong management controls to ensure the accuracy, completeness, and timely reporting of performance data. Because of rigorous internal and external reviews, the FAA's verification and validation process produces performance results in which agency managers, the Administrator, the FAA workforce, and the public can be confident of.

The FAA has created a robust governance structure that has oversight over the agency's performance management framework. In addition to internal verification and review by the FAA, performance data is independently verified by the Department of Transportation. Moreover, data from several FAA safety performance measures, such as the Commercial Air Carrier Fatality Rate, require independent verification by the National Transportation Safety Board (NTSB) and the Bureau of Transportation Statistics. Data for these measures are not considered final until the NTSB completes its report on each incident.

Completeness and Reliability of Performance Data

The agency's internal review processes support the integrity of our performance data. At the beginning of each fiscal year we update our performance measure profiles. These profiles contain technical definitions for each measure, as well as data source information, statistical issues, and completeness and reliability statements. Where the criteria for targets have changed, it is noted and the changes are explained. This robust level of detail earns the FAA a high level of confidence from all interested parties, internal and external, in the accuracy of both the measures themselves and the results the FAA publishes.

To supplement the performance measure profiles, the agency annually conducts an internal review of the verification processes used by all internal FAA organizations responsible for collecting and reporting performance data. The agency's full understanding of these processes allows it to provide complete and definitive documentation of results at the end of the year.

Use of Data and Evidence in FAA Decision-Making

Safety is the core of the FAA's mission and our top priority. While the United States has the safest air transportation system in the world, aviation is a complex and dynamic system that will always include risks. To mitigate these risks and improve the safety of air transportation, the FAA continually monitors data to identify safety trends and conducts discrete evaluations on threats to aircraft and aviation that include fire, extreme weather, aircraft icing, lithium batteries, cyber threats, bird strikes, and more. The data and evidence that the FAA collects from this continuous monitoring, feedback mechanisms from aviation partners, and testing of new technologies and protocols, are critical to informing the agency's decisions on regulations, guidelines, policies, and air traffic control procedures.

The continuous monitoring is particularly important as the FAA deploys programs and safety enhancements. An example is our "Top 5" program. The program continuously monitors safety data to identify growing safety risks in the national airspace system. A cross section of FAA experts form a Safety Roundtable to select the top 5 safety risks. Once identified, mitigation strategies are established for each issue. These experts then continuously track the impacts of these mitigation activities, to ensure the FAA is adequately mitigating the identified risks. Once the safety issue is no longer a growing safety concern, it is replaced with the next most important safety risk. To read more about the Top 5 program, go to page 48.

Another example of FAA tracking and evaluating the efficiency of its safety enhancements is the Runway Incursion Mitigation (RIM) program. A runway incursion is the incorrect presence of a person, vehicle, or aircraft on the protected area of runway. The RIM Program identifies airport locations experiencing a high number of runway incursions, determines the cause, and attempts to address the problem (hence the "mitigation"). Utilizing almost 14,000 runway incursion reports over more than 12 years, the RIM Program has made significant progress since its creation in 2015.

As of October 2021, there are 130 RIM locations at 79 airports. These locations often feature unique geographic layouts and runway intersections that lead to an increased risk of runway incursions. Airports use a combination of strategies to improve these intersections, such as changes to the airport layout, lights, signs, markings, and operational procedures. These strategies reduce the likelihood of pilot confusion and ultimately, runway incursions. To date, the RIM program completed mitigations at 73 locations, with construction projects started at an additional

16 locations in FY 2021. The monitoring of mitigated RIM locations continues over time to determine if mitigation efforts were successful, and if additional mitigation is necessary. Implemented mitigations reduce runway incursions by an average of 81 percent at their specific locations. The collection of this data has allowed the FAA to take a more proactive stance. Instead of using incident data to identify existing locations, the FAA is looking at the risk factors that create RIM locations in order to prevent locations from becoming a concern in the future. FAA's Office of Airports has been evaluating locations across the country this year and developed a prioritized inventory of locations.

Continuous Monitoring of Data

Commercial and General Aviation

The FAA continually monitors aviation data to identify trends, make informed decisions, and address problems before they result in an accident. This effort does not have a beginning and end point like many FAA projects and requires continuous vigilance to maintain safety.

The FAA's Aviation Safety Information Analysis and Sharing (ASIAS) program gathers data from across government and industry, including data from the FAA, members of the general aviation community, commercial airlines, corporate and business aviation operators, universities, aviation manufacturers, as well as maintenance, repair, and overhaul organizations. Participants in ASIAS provide data on a voluntary basis, knowing that information about potential safety problems is shared with the FAA in a non-punitive environment, and that proprietary information is protected.

The FAA participates in two groups that monitor ASIAS and other available data to identify trends, to understand the underlying reasons for safety risks, and to make important safety decisions. The Commercial Aviation Safety Team (CAST) brings together representatives from government, pilot and air traffic controller associations, airlines, airports, and aviation manufacturers to identify the top safety concerns in commercial aviation and to implement interventions. The FAA also participates in the General Aviation Joint Steering Committee (GAJSC) with industry stakeholders such as pilot organizations, flight instructors, mechanics, builders, and manufacturers. Both groups issue voluntary safety enhancements that, along with the development of new aircraft technology, regulations, and other safety activities, have substantially reduced aviation fatalities.

The FAA evaluates the effectiveness of its safety efforts, including the safety enhancements issued by the CAST and the GAJSC, by setting performance goals and monitoring results. For example, the fatality risk for commercial aviation in the U.S. fell by 83 percent from 1998 to 2008, and the FAA aims to reduce the U.S. commercial fatality risk by another 50 percent from 2010 to 2025. This performance goal and the work of CAST are discussed in more detail on pages 45–46. In addition, the FAA aims to reduce the general aviation fatality rate by 10 percent from 2019 to 2028, with a target of no more than 0.89 fatal accidents per 100,000 flight hours by 2028. The work of the GAJSC is discussed in more detail on page 49.

Drone Safety Team (DST)

As Unmanned Aircraft Systems (UAS) have increased in number and complexity, a new group was created in 2016 to monitor safety data from this new airspace entrant. Originally called the Unmanned Aircraft Safety Team, the group recently changed its name to the Drone Safety Team (DST). The goal of the DST is to ensure the safe operations of UAS into the national airspace system through data-driven safety enhancements and collaboration amongst the members of the UAS industry.

The UAS industry is very new, and many young and small UAS companies do not yet have internal safety teams. Unlike well-established airline manufacturers and operators, these small companies have limited resources to measure, train for, anticipate, and simulate risks to their UAS or others in the sky or on the ground, although they clearly recognize the importance of safety. One early challenge for staffing the DST was finding people in these emerging companies who had the time and expertise to devote to working on safety issues. Despite early challenges, the DST now consists of 78 members from the aviation and UAS industries all committed to the team's mission.

Even with limited data to draw from, the DST identified a number of UAS safety issues to mitigate, including loss of control, injury, and lack of a safety culture. DST formed new groups to examine each of these issues. Each group will create a list of safety enhancements and evaluate how effective they are at mitigating risk. With a limited number of accidents, analyzing flight data will be crucial in determining root causes of accidents. DST is also developing a governance structure for their team and a data collection strategy—a topic on which they held a workshop this year with several DST members. DST is committed to promoting safety through participation in Drone Safety Awareness Week and by educating the UAS community on the use of the Aviation Safety Reporting System.

Quality Financial Management

Financial Analysis and Oversight to Inform Decision-Making

When people think of the FAA, they typically think of our air traffic controllers, aviation safety inspectors, engineers, and many others in connection with achievement of our mission to provide the safest, most efficient aerospace system in the world. However, achieving our mission also requires a tremendous amount of "behind the scenes" analysis and oversight by our financial analyst professionals who inform financial decision-making and ensure the agency is a responsible steward of the taxpayer's money. This section highlights some of these activities.

Pilots and passengers walking through the terminal at Hartsfield-Jackson Atlanta International Airport. Photo by Joel Carillet/iStock.

Investment Analysis

The automated systems required to operate our nation's airspace are complex, expensive to develop, and safety-critical. These systems integrate unmanned aircraft into our airspace, support the transition of surveillance from ground-based to satellite-based radar, and help modernize communication between air traffic controllers and pilots from voice to data.

The Joint Resources Council (JRC) is the agency's senior investment review board that makes executive-level resource decisions, including authorization and funding for investment programs, to ensure funding goes to investments with the highest potential to contribute to FAA strategic and performance goals. Before going to the JRC, every program undergoes a rigorous evaluation by the FAA Office of Finance and Management and the NextGen, Aviation Safety, Information Technology, and Air Traffic Organization offices. In these evaluations, the FAA considers many factors such as costs, user benefits, implementation timeline, and risks. In FY 2021, these organizations conducted reviews for 34 separate capital investment decisions by the JRC to ensure that cost, schedule, and benefits estimates were accurate, complete, and well-documented. These decisions encompass over $5.6 billion in agency capital investments. See pages 64–65 for a discussion of the FAA's Major System Investments performance goal.

Procurement Investment Reviews

The FAA relies on outside companies to provide certain contract services and systems, equipment, software, hardware, and other products and services in order to run the nation's airspace system and its mission support activities.

The FAA has a robust set of controls over procurements for contracts including reviews for legal and contractual sufficiency; procurement plans to ensure that outcomes are clearly defined and measurable; performance risks; and ensuring that proposed contracts reflect cost/pricing model incentives and disincentives and, that if implemented, optimize performance.

In FY 2005, the FAA's Chief Financial Officer (CFO) was directed to exercise greater oversight and fiscal control over all agency procurements costing $10 million or more. To ensure fiscal responsibility as part of the agency's overall set of procurement controls and processes, the CFO has pre-solicitation approval authority over each of these proposed procurement actions. To inform the CFO's decision, the Office of Financial Services analyzes costs, performance, schedule, and procurement-related risks, and makes risk-reduction

Every **Air Traffic Control facility** in the country has a contingency plan to keep air traffic moving safely when events impede normal operations.

Learn more about our resilient national airspace system, here: https://www.youtube.com/watch?v=LDYuRCRDhMk.

recommendations. An additional benefit of these reviews is that time-consuming rework and contract reconciliations have decreased, which helps FAA meet its procurement milestones and satisfy their business needs more efficiently and effectively. These controls also help uphold the FAA's procurement decisions when they are reviewed by internal and external auditors.

Since this more robust procurement-investment-review process began in FY 2005, the Office of Financial Services has evaluated 984 procurement packages with an estimated total value of more than $145.8 billion, greatly improving the agency's ability to better define program requirements, more accurately estimate costs, and substantiate those cost estimates. In FY 2021, the Office of Financial Analysis reviewed 63 procurement packages for proposed investments, each with estimated values of $10 million or more to support CFO decisions on about $8.2 billion of procurements.

Information Technology

To better coordinate FAA's information technology (IT) investments, any IT-related spending in excess of $250,000 must be approved by the FAA's Chief Information Officer. This requirement ensures that IT investments are coordinated and consistent with the FAA's agency-wide IT strategy. The IT Shared Services Committee, chaired by the Chief Information Officer, serves as a forum to discuss and ensure effective, secure, and cost-efficient use of IT resources across the agency.

Conferences

In FY 2009, the CFO and FAA Acquisition Executive issued guidance requiring that all conferences estimated to cost $100,000 or more be approved by the CFO before funds may be committed. That continues today, in concert with additional actions taken by the FAA to strengthen policies and controls over conference spending. For example, in FY 2010, the level of approval was elevated to the Administrator, and in FY 2012 it was elevated to the Deputy Secretary of the DOT.

Reflecting strengthened internal controls for conference spending across government, in FY 2017, Office of Management and Budget issued its Memorandum M-17-26, raising the dollar threshold of conferences requiring Deputy Secretary approval to $500,000. However, to ensure continued strong fiscal responsibility, the FAA Administrator also reviews all conferences proposed to be held by the agency costing more than $20,000.

Cost Control Program

The FAA's strategic plan includes an objective to improve the financial management of the agency while delivering quality customer service. Each fiscal year, FAA lines of business and staff offices determine annual savings estimates for cost-saving activities. The target is set at 90 percent of the total cost-savings estimate for the fiscal year for all activities included in the program. In FY 2021, the Cost Control Program met its target for the year. Monthly, the FAA tracks and reports the actual cost savings for the activities included in the program. The FAA's efforts in this area are described below:

FY 2021 COST CONTROL PROGRAM RESULT
(Dollars in Thousands)

Activity	FY 2021 Savings Estimate	Actual FY 2021 Savings	FY 2021 Savings as a Percent of Estimate
SAVES	$51,671	$92,576	179%
Office of Information & Technology Services Harvesting	$3,656	$2,670	73%
Administrative Space Reduction	$2,500	$2,500	100%
National Wireless Program	$2,100	$3,053	145%
VERA/VSIP	$1,829	$1,948	107%
Worker's Compensation	$1,750	$2,783	159%
DOT e-Learning Management System	$535	$535	100%
E-Invoicing	$250	$424	170%
Enterprise Services Center License Reduction	$150	$306	204%
Total	**$64,442**	**$106,796**	**166%**
TARGET	**$57,998**		**184%**

How activities are selected for the Cost Control Program: For an activity to be included in the Cost Control Program, the savings must be measurable. Activities must produce legitimate cost savings and not simply shift costs to other time periods or other FAA lines of business, and the cost savings must be

measured net of any implementation costs or offsetting impacts to other organizations or activities.

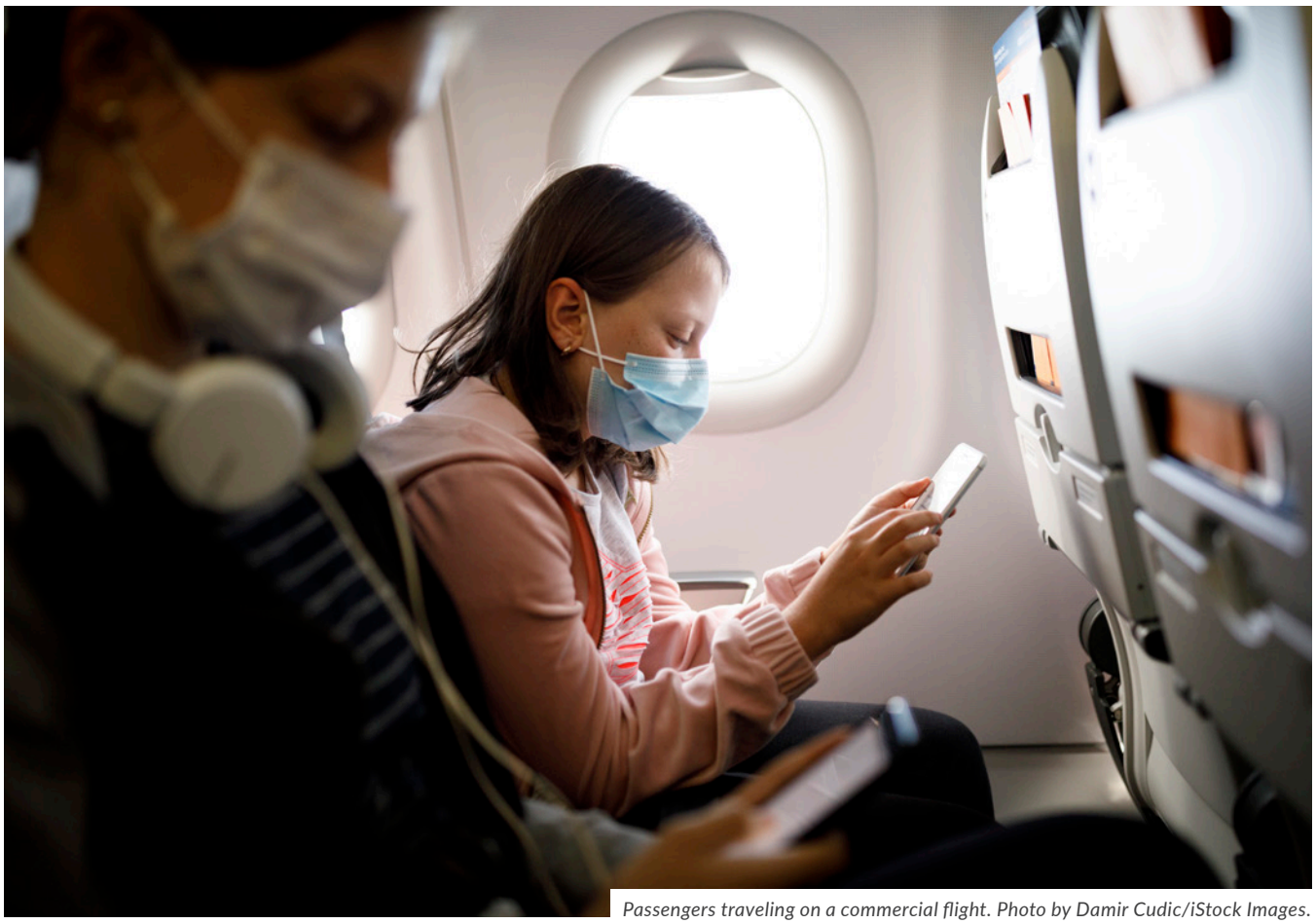
Activities must meet the following:

- The reduction in costs must be measurable and able to be accurately estimated.
- Estimates must be based on accepted industry standards and able to withstand an audit by an external organization; estimates are also validated by the FAA's finance office.
- Cost savings must reflect a reduction in the total costs incurred by the FAA and not simply a shifting of costs from one fiscal year to another.
- Cost savings should represent a genuinely more efficient way of conducting operations and should not simply be the result of a natural cycle in costs.
- Cost control activities that represent a permanent shift in the composition of the workforce should not have associated decreases in the level of services the organization provides.

The Strategic Sourcing for the Acquisition of Various Equipment and Supplies (SAVES) Program: The SAVES program is an ambitious effort that began in FY 2006 to implement private sector best practices in the FAA's procurement of administrative supplies, equipment, information technology hardware, commercial off-the-shelf software, and courier services. In FY 2021, the SAVES contracts achieved $92.6 million in cost savings and total savings of $585.8 million since program implementation began in FY 2006. About 99 percent of FY 2021 savings were generated by information technology hardware and software.

Office of Information & Technology Services Harvesting: Licenses for installations of Microsoft Project and Visio that had not been used for at least 90 days were reallocated, leading to a cost avoidance of $2.7 million for the FAA in FY 2021.

Administrative Space Reduction: The FAA is implementing and managing programs that drive the efficient and economical use of its real property assets. Annually since FY 2014, the FAA has established a goal to achieve a square footage reduction in its administrative space portfolio by identifying and implementing space consolidation, relocation, and colocation initiatives. In FY 2021, the FAA saved $2.5 million.



Passengers traveling on a commercial flight. Photo by Damir Cudic/iStock Images.

National Wireless Program: This program manages the ever-growing, mobile-connected workforce. Cost savings are achieved by analyzing usage and determining the most cost-effective plan for individual users and by leveraging the volume of the inventory to obtain volume-pricing discounts. FY 2021 savings for this activity were $3.1 million.

Voluntary Early Retirement Authority (VERA) and Voluntary Separation Incentive Payments (VSIP): The FAA provided incentives for retirement and/or separation to eligible employees. Savings were realized through abolished positions or backfilling these positions at a reduced experience/salary level. The FAA established the cost-savings target based on the estimated reduction in personnel costs associated with the number of employees projected to accept the offer. In FY 2021, the agency saved $1.9 million from this initiative.

Workers' Compensation: The FAA works with the Department of Labor (DOL) to develop case management strategies with a focus on returning injured employees to work earlier, reducing lost production, and reducing the cost of workers' compensation. To achieve these strategies, FAA undertakes many efforts, including:

- Electronic filing of injury and illness claims, which expedites receipt of the claim at the DOL and authorization for medical treatment.
- Early intervention actions on disability claims, including initiating contact with the injured worker to discuss their responsibility to return to duty when medically able.
- Requesting and analyzing contemporaneous medical documentation to determine work capacity.
- Collaborating with supervisors across various DOT agencies to facilitate return to work by providing light duty assignments when appropriate.
- Conducting ongoing reviews of long-term claims and maintaining a collaborative partnership with claims staff at DOL.

The FAA has saved $178.7 million in workers' compensation claims since FY 2005. Due to the FAA's success in this area, the DOT gave the FAA centralized responsibility for managing workers' compensation claims DOT-wide. In FY 2021, the FAA saved the DOT $2.8 million in workers' compensation costs. Cost avoidance is estimated as follows:

1. Short-term disability claims (disability < one year)—computed as compensation payments avoided from the date of return to work through the remaining balance of one year following the employee's date of injury. Short-term calculations are based on regulation standards and DOL standards.[1]
2. Long-term disability claims (disability > one year)—computed as compensation payments avoided over the course of one full calendar year from the date of successful resolution (return to work, termination/reduction of benefits, etc.).
3. Questionable claims challenged by the FAA's Human Resource Management National Workers' Compensation Program Office and denied by the DOL—computed as compensation payments avoided over the course of one full calendar year from the date of injury.

DOT e-Learning Management System: The FAA extended its online learning system to the rest of the DOT agencies, covering an additional 10,500 employees and about 500 more courses. Due to this consolidation effort that resulted in fixed cost sharing, the FAA was able to save $535,202 in FY 2021.

E-Invoicing: The FAA implemented electronic invoicing for vendors through the DELPHI e-invoicing web-portal and through the use of an Electronic Data Interchange. This implementation was in response to Office of Management and Budget Memorandum 15-19, *Improving Government Efficiency and Saving Taxpayer Dollars Through Electronic Invoicing*.

The DELPHI electronic invoicing web-portal is a real-time electronic invoicing tool that improves efficiency and data transparency by reducing the time between invoice submission and payment, and by providing vendors with accurate invoice status and reporting capabilities. The Electronic Data Interchange reduces the level of effort associated with manually keying and processing invoices, and provides vendors with increased visibility into the status of payments, reducing the need for status inquiries with the FAA. DELPHI electronic invoicing and the Electronic Data Interchange consolidated a variety of legacy invoice approval systems into one single system of record, and resulted in a cost savings of $424,493 in FY 2021.

Enterprise Services Center License Reduction: The FAA's Enterprise Services Center streamlined activities to reduce the number of Oracle licenses needed to support customers and negotiated better pricing on Oracle licensing agreements. These activities saved $306,356 in FY 2021.

1 Office of Personnel Management regulations provide disabled employees with job retention rights if they return to work within one year from the commencement of their disability. Department of Labor uses an internal goal of having disabled employees return to work within one year.

Efficiency

In addition to cost control, each FAA organization develops, tracks, and reports quarterly on a comprehensive measure of its operating efficiency and financial performance.

Air Traffic Organization Cost-per-Operation. This cost-based metric provides a broad historical picture of the overall cost efficiency of air traffic control. The FAA regularly reviews its Air Traffic Organization's cost-per-operation to evaluate cost efficiency over the course of time and compares it with our international counterparts. The most recent Cost-per-Operation data available is for the fiscal years ending September 30, 2019 and 2020:

Air Traffic Organization Cost-per-Operation

2019	2020
$ 84.41	$ 107.80

In FY 2020, the Air Traffic Organization Cost-per-Operation increased by 27.71 percent over FY 2019. This was driven by a 1.1 percent increase in Air Traffic Organization costs and a 20.8 percent decrease in traffic.

Data for this metric is not yet available for the full fiscal year ending September 30, 2021; however, listed below is a comparison of the Air Traffic Organization Cost-per-Operation Results for the first three quarters of FY 2020 and FY 2021, ending June 30 of each year:

Air Traffic Organization Cost-per-Operation

2020 Q3	2021 Q3
$ 106.70	$ 106.90

For the most recent partial period available (the first three quarters of FY 2021) the Air Traffic Organization Cost-per-Operation increased by 0.18 percent over the same period a year earlier. This was driven by a 0.3 percent decrease in Air Traffic Organization costs and a 0.5 percent decrease in traffic. Note that this metric is the average cost-per-air traffic operation. Therefore, when the number of operations increases at a greater rate than cost, the metric decreases for a given period. Conversely, if cost increases at a greater rate than the number of operations, the metric increases for a given period.

Overhead Rates. This metric provides insight into the cost-effectiveness of overhead resources at the FAA. The resulting performance indicator informs management decisions concerning the allocation of general and administrative services and mission support services. The most recent overhead rate data available is for the fiscal years ending September 30, 2019 and 2020:

Overhead Rates

2019	2020
27.0%	28.5%

This is a composite overhead rate of all of the FAA's lines of business and staff offices. The overhead rate increased slightly because more Operations funding was obligated in some organizations in FY 2020 as compared to FY 2019.

Regulatory Cost-per-Launch/Reentry. This metric provides trend data for the average regulatory cost-per-launch or reentry of commercial space vehicles. This information is used to track how efficiently the FAA is interacting with the commercial space industry. Trend data are also reviewed to forecast human resource needs to regulate and support future launch and reentry operations.

Regulatory Cost-per-Launch/Reentry

2019	2020
$ 572,933	$ 528,319

In FY 2020, Regulatory Cost-per-Launch/Reentry saw a decrease of 7.8 percent over FY 2019, which was driven by two factors: three more launches/reentries, together with only a very slight increase in labor cost to support the expanding mission of the Office of Commercial Space Transportation.

Regulatory Cost-per-Launch/Reentry

2020 Q3	2021 Q3
$ 537,876	$ 271,258

For the most recent partial period available (the first three quarters of FY 2021), Regulatory Cost-per-Launch/Reentry is 48.66 percent lower than it was in FY 2020 Q3. The driving factor is the significant increase in the number of launches/reentries. The increase in launches this fiscal year supports the expanding mission and continued success of the Office of Commercial Space Transportation.

CROSS CHECK YOUR KNOWLEDGE

Ensuring Diversity and Inclusivity for a More Effective FAA Workforce

The FAA is committed to ensuring a diverse and inclusive workforce both internally within FAA as well as externally throughout the aviation sector. Achievement of the FAA's critical work is made possible in part by our ability to attract and retain a talented and dedicated workforce that reflects the diverse backgrounds of those we serve. To that end, the agency administers several programs aimed at building both internal and external workforces, to address current and future needs.

Minority Serving Institutions (MSI) Internship Program

The MSI Internship Program seeks to build a robust pipeline of entry-level, diverse, and highly qualified talent into the FAA, along with raising awareness about employment opportunities in the aviation industry. An important focus of the program is providing opportunities to eligible students from groups that have been underrepresented in aviation, aeronautics, and science, technology, engineering, and mathematics fields. Through the MSI Internship Program, students are provided an opportunity to capitalize on their academic studies and gain meaningful work experience and developmental activities, in addition to gaining professional knowledge, expertise, and practical experience to chart their own career paths and make informed career choices.

While the pandemic hindered the operations of many federal agencies, FAA's MSI Internship Program remained strong during the pandemic; and in fact, recorded a 300 percent increase in participation since 2018.

FAA Task Force Focused on Youth Access to Jobs

The Youth Access to American Jobs in Aviation Task Force—which is comprised of aviation leaders from industry and academia, and charged with providing independent recommendations and strategies to the FAA to educate youth on career opportunities in aviation—held three public meetings in FY 2021. The Task Force is conducting its work under four sub-committees: Trends, Awareness Building, Funding, and Expanded Pathways. Focusing on U.S. high school students, the Youth Access to American Jobs in Aviation Task Force recommendations and strategies will be presented to the FAA in 2022 and will be used to facilitate and encourage students to enroll in aviation career and technical education courses, and to help identify and develop pathways for students.

Accessing More Women, Minorities, and Individuals from Underrepresented Communities in Aviation

Ahead of the short window for eligible U.S. citizens to apply to become air traffic control specialists in FY 2021, the FAA launched a week-long campaign to encourage more applications from women, minorities, and individuals from underrepresented communities. The campaign featured current air traffic controllers and FAA leaders sharing their stories in media interviews, on social media, during Instagram Live conversations, and on other platforms.

Workforce Grant Programs

Totaling $5 million each, two grant programs—the Aircraft Pilots Workforce Development Grants and the Aviation Maintenance Technical Workers Workforce Development Grants—were authorized by the U.S. Congress in the FAA's 2018 reauthorization legislation. These two programs intended to support the education of future aircraft pilots; operators of unmanned aircraft systems; aerospace engineers in rural, urban, and suburban areas; aviation maintenance technicians (including those underrepresented in the field and in economically disadvantaged areas); and veterans transitioning from military service. The grant application period occurred in early FY 2021 and drew a very strong public response, with several hundred applications filed.

STEM AVSED Outreach

In addition to these efforts, the agency continues to promote a strong Science, Technology, Engineering, and Mathematics (STEM) Aviation and Space Education (AVSED) program. For more information about the FAA's STEM AVSED Program, see page 58. Learn more about FAA's outreach efforts at *faa.gov/education*, and read about the ways aviation outreach is still happening during the pandemic, here: *https://medium.com/faa/7-ways-aviation-outreach-is-still-happening-during-the-pandemic-311f668edd9*.

FINANCIAL RESULTS

Runway at sunset. Photo by Piotr Mitelski/iStock Images.

DAVID RICKARD

A MESSAGE *from the* CHIEF FINANCIAL OFFICER

I am proud that our FAA workforce has proven more resilient than ever. Even amidst the challenges of the pandemic, they continue to provide the safest airspace in the world. In addition to the operational challenges, the pandemic also presented several financial and economic challenges for the FAA and our nation's airports due to significant reductions in air travel and the suspension of many aviation taxes.

> *"the pandemic ... presented several financial and economic challenges for the FAA and our nation's airports due to significant reductions in air travel and the suspension of many aviation taxes."*

The unprecedented drop in aviation activity in 2020 and the temporary suspension of aviation-related excise taxes resulted in vastly reduced revenues flowing into the Airport and Airway Trust Fund (AATF) last year. This was a significant financial challenge because the AATF usually pays for most of the FAA's annual budget, including all of the FAA's facilities and equipment; all of its research, engineering, and development activities; almost all of its airport capital grants; and the majority of FAA's operations. To address this challenge, on October 1, 2020 the U.S. Congress appropriated a one-time infusion of $14 billion into the AATF. You can read more about this on pages 27, 29, 30, and 32 . By the end of this fiscal year, air travel levels have returned to nearly 93 percent of pre-pandemic activity levels, substantially restoring the flow of revenues into the AATF.

The reduction in air travel also presented financial challenges for our nation's airports. Last year, the CARES Act tasked us with administering an additional $10 billion in grants to airports to help offset lost operating revenues due to the pandemic. This year, the Coronavirus Response and Relief Supplemental Appropriations Act and the American Rescue Plan Act together provided another $10 billion for FAA grants to help the nation's airports contend with the financial impacts of COVID-19. This funding represents new activities for the FAA, which has traditionally provided airport grants to support capital improvements. These new programs drove up our disbursements this fiscal year alone by about $4.5 billion.

The FAA also began managing a new area of responsibility—the Aviation Workforce Development Grant Program, which will help develop a pipeline of skilled aviation professionals through grants to educational programs for aircraft pilot and aviation maintenance technicians.

I am very proud to report that we have undertaken these significant financial programs and new responsibilities while maintaining our track record of strong payment integrity at a rate of 99.94 percent accuracy. See more information on COVID-19 activity in Note 20 on page 131, and in the section on Payment Integrity on page 140. As we move into FY 2022, we look forward to meeting the administration's focus on infrastructure and continuing our support of the important priorities of employee equity and environmental protection.

We are proud of our ability to maintain exceptional financial management even as we undertake significant new spending responsibilities. Even with these significant new responsibilities and in spite of this

unprecedented environment, we have once again achieved an unmodified audit opinion on our FY 2021 financial statements. Also this year, the Association of Government Accountants awarded FAA the prestigious Certificate of Excellence in Accountability Reporting (CEAR) award for the 17th time, as well as a special "best in class" award for "A Report that Tells A Story." The CEAR award is considered the highest form of recognition in federal government financial and performance management reporting. Read more about our CEAR recognition on page 3.

Our goal continues to be to move the national air transportation system safely, efficiently, and responsibly into the future. We pursue this goal despite challenging circumstances and while taking on responsibility for vastly expanded programs. We continue to do so in a manner that reflects the highest standards of fiscal responsibility and accountability.

DAVID RICKARD
Chief Financial Officer
November 9, 2021

Office of the Inspector General (OIG) Quality Control Review

U.S. Department of Transportation
Office of Inspector General

Memorandum

Date: November 12, 2021

Subject: ACTION: Quality Control Review of the Independent Auditor's Report on the Federal Aviation Administration's Audited Consolidated Financial Statements for Fiscal Years 2021 and 2020 | Report No. QC2022013

From: Dormayne "Dory" Dillard-Christian
Acting Assistant Inspector General for Financial Audits

To: Federal Aviation Administrator

I respectfully submit the results of our quality control review (QCR) of the independent auditor's report on the Federal Aviation Administration's (FAA) audited consolidated financial statements for fiscal years 2021 and 2020.

We contracted with the independent public accounting firm KPMG, LLP to audit FAA's consolidated financial statements as of and for the fiscal years ended September 30, 2021, and September 30, 2020, and provide an opinion on those financial statements, report on internal control over financial reporting, and report on compliance with laws and other matters. The contract required the audit to be performed in accordance with U.S. generally accepted Government auditing standards, Office of Management and Budget audit guidance, and the Government Accountability Office's and Council of the Inspectors General on Integrity and Efficiency's *Financial Audit Manual*.[1]

We appreciate the cooperation and assistance of FAA's representatives and KPMG. If you have any questions about this report, please call me at (202) 570-6381, or Ingrid Harris, Program Director, at (202) 450-7637.

cc: The Secretary
DOT Audit Liaison, M-1
FAA Audit Liaison, AAE-001

[1] GAO, *Financial Audit Manual*, Volume 1 (GAO-18-601G), April 2020; Volume 2 (GAO-18-625G), March 2021; Volume 3, (GAO-21-105127), September 2021.

Independent Auditor's Report

In its audit of FAA's consolidated financial statements for fiscal years 2021 and 2020, KPMG reported that

- FAA's consolidated financial statements[2] were fairly presented, in all material respects, in accordance with U.S. generally accepted accounting principles;
- it found one significant deficiency[3] in internal control over financial reporting that it did not consider to be a material weakness;[4] and
- there were no instances of reportable noncompliance with provisions of laws tested, or reportable other matters.

KPMG made three recommendations to address the significant deficiency in internal control over financial reporting (see attachment 1).

Significant Deficiency

Weaknesses in general information technology controls. KPMG identified general information technology control deficiencies at the application, database, and/or operating system levels related to audit log review and access controls for FAA's general ledger, timekeeping, inventory, procurement, and environmental systems. More specifically, controls were not operating effectively over system access, including privileged account reviews, new user authorizations, and periodic review and recertification of access. Furthermore, FAA had not completed remediation related to controls identified in the prior year as not operating effectively over the review of audit logs, including documentation of appropriate and timely completion of the review.

KPMG also determined that FAA management did not develop component-specific implementation of security plan requirements for certain systems.

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[2] The consolidated financial statements are included in FAA's Performance and Accountability Report (see attachment 3). For FAA's full Performance and Accountability Report, which includes these statements, related notes, and required supplementary information, go to https://www.faa.gov/about/plans_reports/#performance.

[3] A significant deficiency is a deficiency, or a combination of deficiencies, in internal control over financial reporting that is less severe than a material weakness but important enough to merit attention by those charged with governance. A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis.

[4] A material weakness is a deficiency, or a combination of deficiencies, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis.

Recommendations

To help strengthen FAA's general information technology controls, KPMG recommended that FAA management design and implement:

1. Procedures to consistently and timely perform and document audit log reviews as required by standards for effective internal control systems and/or internal policy;
2. Procedures to consistently and timely perform and document user account access reviews as required by standards for effective internal control systems and/or internal policy; and
3. Component-specific system security plan requirements in instances where plans for those areas not addressed in the Departmental system security plan.

Quality Control Review

We performed a QCR of KPMG's report, dated November 9, 2021, and related documentation, and inquired of its representatives. Our review, as differentiated from an audit of the financial statements in accordance with U.S. generally accepted Government auditing standards, was not intended to enable us to express, and we do not express, an opinion on FAA's financial statements or conclusions about the effectiveness of internal control over financial reporting, or compliance with laws and other matters. KPMG is responsible for its report and the conclusions expressed therein.

Our QCR disclosed no instances in which KPMG did not comply, in all material respects, with U.S. generally accepted Government auditing standards.

Agency Comments and OIG Response

KPMG provided FAA with its draft report on November 4, 2021, and received FAA's response, dated November 9, 2021 (see attachment 2). FAA agreed with the deficiency KPMG found.

FAA concurred with KPMG's three recommendations and committed to developing a corrective action plan to address the deficiencies by December 31, 2021. We agree with KPMG's recommendations and are not making any additional recommendations.

Actions Required

We consider all three of KPMG's recommendations open and unresolved pending receipt of the corrective action plan.

QC2022013 4

Exhibit. List of Acronyms

DOT	Department of Transportation
FAA	Federal Aviation Administration
OIG	Office of Inspector General
QCR	quality control review

Independent Auditors' Report

KPMG LLP
Suite 12000
1801 K Street, NW
Washington, DC 20006

Independent Auditors' Report

Administrator, Federal Aviation Administration and Inspector General
United States Department of Transportation, Federal Aviation Administration:

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of the United States Department of Transportation, Federal Aviation Administration (FAA), which comprise the consolidated balance sheets as of September 30, 2021 and 2020, and the related consolidated statements of net cost and changes in net position, and combined statements of budgetary resources for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America, in accordance with the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, and in accordance with Office of Management and Budget (OMB) Bulletin No. 21-04, *Audit Requirements for Federal Financial Statements*. Those standards and OMB Bulletin No. 21-04 require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the United States Department of Transportation, Federal Aviation Administration as of September 30, 2021 and 2020, and its net costs, changes in net position, and budgetary resources for the years then ended in accordance with U.S. generally accepted accounting principles.

Other Matters

Interactive Data

Management has elected to reference to information on websites or other forms of interactive data outside the Performance and Accountability Report to provide additional information for the users of its consolidated financial statements. Such information is not a required part of the basic consolidated financial statements or supplementary information required by the Federal Accounting Standards Advisory Board. The information on these websites or the other interactive data has not been subjected to any of our auditing procedures, and accordingly we do not express an opinion or provide any assurance on it.

Required Supplementary Information

U.S. generally accepted accounting principles require that the information in the Management's Discussion and Analysis and Required Supplementary Information sections be presented to supplement the basic consolidated financial statements. Such information, although not a part of the basic consolidated financial statements, is required by the Federal Accounting Standards Advisory Board who considers it to be an essential part of financial reporting for placing the basic consolidated financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic consolidated financial statements, and other knowledge we obtained during our audits of the basic consolidated financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audits were conducted for the purpose of forming an opinion on the basic consolidated financial statements as a whole. The In a Day's Work, Foreword, Messages from the Administrator and the Chief Financial Officer, Performance Results and Other Information sections, as listed in the Table of Contents of the Performance and Accountability Report is presented for purposes of additional analysis and is not a required part of the basic consolidated financial statements. Such information has not been subjected to the auditing procedures applied in the audits of the basic consolidated financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by *Government Auditing Standards*

Internal Control over Financial Reporting

In planning and performing our audit of the consolidated financial statements as of and for the year ended September 30, 2021, we considered the FAA's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the consolidated financial statements, but not for the purpose of expressing an opinion on the effectiveness of the FAA's internal control. Accordingly, we do not express an opinion on the effectiveness of the FAA's internal control. We did not test all internal controls relevant to operating objectives as broadly defined by the *Federal Managers' Financial Integrity Act of 1982*.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that have not been identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify certain deficiencies in internal control, described in the accompanying exhibit as item 2021-01 that we consider to be a significant deficiency.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the FAA's consolidated financial statements as of and for the year ended September 30, 2021 are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the consolidated financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards* or OMB Bulletin No. 21-04.

FAA's Response to Findings

The FAA's response to the findings identified in our audit is described and presented in the section *Management's Response to the Independent Auditor's Report*. The FAA's response was not subjected to the auditing procedures applied in the audit of the consolidated financial statements and, accordingly, we express no opinion on the response.

Purpose of the Other Reporting Required by Government Auditing Standards

The purpose of the communication described in the Other Reporting Required by *Government Auditing Standards* section is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the FAA's internal control or compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

Washington, DC
November 9, 2021

2021 - 01: Weaknesses in General Information Technology Controls

Background

The Federal Aviation Administration (FAA) utilizes various information technology systems to carry out its mission and to compile amounts recorded in its financial statements. In addition to its general ledger system, FAA utilizes various information technology systems including; a timekeeping system to record employee time and attendance, an inventory system related to asset management and inventory control, a procurement system to record and track requisitions, purchase orders, and contracts, and a site management system that tracks the environmental investigation, remediation, and regulatory closure status of the FAA's environmental sites.

The general ledger system and the timekeeping systems are owned by the Department of Transportation (the Department). All other systems are owned by the FAA.

For systems owned by FAA, FAA is required to implement controls defined in the component-specific system security plans for those areas not addressed in the Departmental system security plan. For systems owned by the Department, the Department is required to implement controls defined in the component-specific system security plans for those areas not addressed in the Departmental system security plan.

Criteria

The U.S. Government Accountability Office (GAO) *Standards for Internal Control in the Federal Government* (Green Book), sets the standards for an effective internal control system and provides an overall framework for designing, implementing, and operating effective internal control systems. The standards require entities to design appropriate types of control activities to include limiting access to resources and records to authorized individuals, and to periodically compare resources with the recorded accountability to help reduce the risk of errors, fraud, misuse, or unauthorized alteration. In addition, management should communicate quality information down and across reporting lines to enable personnel to perform key roles in achieving objectives, addressing risks, and supporting the internal control system. In these communications, management assigns the internal control responsibilities for key roles.

Condition

Control deficiencies exist at the application, database, and/or operating system levels related to audit log review and access controls for the systems mentioned above and as listed below:

- Remediation is not complete related to controls identified in the prior year as not operating effectively over the review of audit logs, including documentation to evidence appropriate and timely completion of the review.
- Controls were not operating effectively over system access, including privileged account reviews, new user authorizations, and periodic review and recertification of access.

In addition, operating administration management did not develop component-specific implementation of security plan requirements for certain systems.

Cause

Management has not established, or consistently implemented procedures to ensure compliance with standards for effective internal control systems and/or internal policy.

Effect

The absence of timely reviews of audit logs leaves the FAA exposed to the risk of delays in identifying and responding to incidents which could result in the exposure, modification, or loss of system data. Further, user accounts with inappropriate access may result in unauthorized use, disclosure, or modification of system data. Lastly, weaknesses in security management controls increase the risk that systems are not properly controlled and secured.

Recommendations

We recommend that FAA management design and implement:

1. Procedures to consistently and timely perform and document audit log reviews as required by standards for effective internal control systems and/or internal policy.

2. Procedures to consistently and timely perform and document user account access reviews as required by standards for effective internal control systems and/or internal policy.

3. Component-specific system security plan requirements in instances where plans for those areas are not addressed in the Departmental system security plan.

Management's Response to the FY 2021 Independent Auditors' Report

November 9, 2021

U.S. Department of Transportation
Federal Aviation Administration

Office of Financial Services

800 Independence Ave. S.W.
Washington, DC 20591

November 9, 2021

Mr. James Gould
KPMG LLP
1801 K Street, NW, Suite 1200
Washington, DC 20006

Dear Mr. Gould,

We have received your Independent Auditors' Report related to the Federal Aviation Administration's fiscal years 2021 and 2020 consolidated financial statements and offer the following response.

We appreciate working with you in support of an efficient and effective audit and are pleased to receive an unmodified audit result. The audit is an essential part of our fiscal responsibilities to our citizens and we take it very seriously.

We concur with the finding and recommendations in your report that additional remediation work is required to mitigate the noted significant deficiency. We will refine the adopted corrective action plan to further address this weakness and provide it to the Office of Inspector General by December 31, 2021. The corrective actions will include updating procedures and governing policies to consistently and timely perform and document audit log and user account access reviews, and further implement component-specific system security plan requirements. I will monitor implementation of the plan throughout the corrective action process.

Thank you for your candor and the professional manner in which you and your team conducted your audit.

Sincerely,

David Rickard
Chief Financial Officer

Financial Statements

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CONSOLIDATED BALANCE SHEETS

As of September 30, 2021 and 2020
(Dollars in Thousands)

	2021	2020
ASSETS		
Intragovernmental		
Fund balance with Treasury (Note 2)	$ 13,196,463	$ 10,995,645
Investments, net (Note 3)	18,189,656	10,259,928
Accounts receivable, net (Note 4)	12,372	16,745
Advances and prepayments	94,101	88,948
Total intragovernmental	31,492,592	21,361,266
Other than intragovernmental/with the public		
Accounts receivable, net (Note 4)	30,308	30,039
Inventory and related property, net (Note 5)	810,664	811,168
General property, plant, and equipment, net (Note 6)	11,670,008	11,917,696
Advances and prepayments	690	954
Other assets (Note 7)	–	27
Total other than intragovernmental/with the public	12,511,670	12,759,884
Total assets	$ 44,004,262	$ 34,121,150
LIABILITIES		
Intragovernmental		
Accounts payable	$ 9,833	$ 29,475
Advances from others and deferred revenue	206,838	207,148
Other liabilities (Note 10)	313,200	306,745
Total intragovernmental	529,871	543,368
Other than intragovernmental/with the public		
Accounts payable	441,797	410,601
Federal employee benefits payable	1,328,131	1,343,644
Environmental and disposal liabilities (Note 9)	752,148	745,540
Advances from others and deferred revenue	152,613	189,319
Other liabilities		
Accrued grant liabilities	7,230,444	5,161,060
Other (Note 10)	447,854	417,475
Total other than intragovernmental/with the public	10,352,987	8,267,639
Total liabilities	$ 10,882,858	$ 8,811,007
Commitments and contingencies (Note 12)		
NET POSITION		
Unexpended appropriations - funds from dedicated collections (combined) (Note 13)	$ 716,250	$ 432,928
Unexpended appropriations - funds from other than dedicated collections (combined)	4,838,873	–
Total unexpended appropriations (consolidated)	5,555,123	432,928
Cumulative results of operations – funds from dedicated collections (combined) (Note 13)	17,645,310	14,194,593
Cumulative results of operations – funds from other than dedicated collections (combined)	9,920,971	10,682,622
Total cumulative results of operations (consolidated)	27,566,281	24,877,215
Total net position	33,121,404	25,310,143
Total liabilities and net position	$ 44,004,262	$ 34,121,150

The accompanying notes are an integral part of these financial statements.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CONSOLIDATED STATEMENTS OF NET COST

For the Years Ended September 30, 2021 and 2020
(Dollars in Thousands)

LINE OF BUSINESS PROGRAMS (NOTE 14)	2021	2020
Air Traffic Organization		
Gross program costs	$ 12,816,633	$ 12,436,808
Less earned revenues	(357,425)	(358,167)
Net cost	12,459,208	12,078,641
Airports		
Gross program costs	11,225,978	11,300,066
Net cost	11,225,978	11,300,066
Aviation Safety		
Gross program costs	1,737,993	1,622,514
Less earned revenues	(7,022)	(12,174)
Net cost	1,730,971	1,610,340
Security and Hazardous Materials Safety		
Gross program costs	149,892	139,621
Less earned revenues	(15,743)	(46,095)
Net cost	134,149	93,526
Commercial Space Transportation		
Gross program costs	34,186	28,322
Net cost	34,186	28,322
NON-LINE OF BUSINESS PROGRAMS		
Gross program costs	277,631	268,557
Less earned revenues	(139,992)	(190,235)
Net cost	137,639	78,322
NET COST OF OPERATIONS		
Total gross program costs	26,242,313	25,795,888
Less earned revenues	(520,182)	(606,671)
Total net cost	$ 25,722,131	$ 25,189,217

The accompanying notes are an integral part of these financial statements.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CONSOLIDATED STATEMENTS OF CHANGES IN NET POSITION

For the Years Ended September 30, 2021 and 2020
(Dollars in Thousands)

	2021			2020		
UNEXPENDED APPROPRIATIONS	Funds from dedicated collections (combined) (Note 13)	Funds from other than dedicated collections (combined)	Consolidated total	Funds from dedicated collections (combined) (Note 13)	Funds from other than dedicated collections (combined)	Consolidated total
Beginning balances	$ 432,928	$ –	$ 432,928	$ 730,649	$ –	$ 730,649
Appropriations received (Note 16)	482,500	24,409,000	24,891,500	111,000	10,400,000	10,511,000
Other adjustments	(50,235)	–	(50,235)	(73,203)	–	(73,203)
Appropriations used	(148,943)	(19,570,127)	(19,719,070)	(335,518)	(10,400,000)	(10,735,518)
Net change in unexpended appropriations	283,322	4,838,873	5,122,195	(297,721)	–	(297,721)
Total unexpended appropriations - ending	$ 716,250	$ 4,838,873	$ 5,555,123	$ 432,928	$ –	$ 432,928
CUMULATIVE RESULTS OF OPERATIONS						
Beginning balances	$ 14,194,593	$ 10,682,622	$ 24,877,215	$ 18,842,731	$ 11,027,855	$ 29,870,586
Appropriations used	148,943	19,570,127	19,719,070	335,518	10,400,000	10,735,518
Non-exchange revenue – excise taxes and other	8,466,804	–	8,466,804	9,348,111	–	9,348,111
Transfers-in/out without reimbursement	12,939,495	(13,134,060)	(194,565)	8,881,011	(9,148,415)	(267,404)
Donations and forfeitures of property	–	25,703	25,703	–	35,860	35,860
Imputed financing (Note 15)	383,923	10,262	394,185	334,103	9,575	343,678
Other	–	–	–	–	83	83
Net cost of operations	18,488,448	7,233,683	25,722,131	23,546,881	1,642,336	25,189,217
Net change in cumulative results of operations	3,450,717	(761,651)	2,689,066	(4,648,138)	(345,233)	(4,993,371)
Cumulative results of operations - ending	$ 17,645,310	$ 9,920,971	$ 27,566,281	$ 14,194,593	$ 10,682,622	$ 24,877,215
Net position	$ 18,361,560	$ 14,759,844	$ 33,121,404	$ 14,627,521	$ 10,682,622	$ 25,310,143

The accompanying notes are an integral part of these financial statements.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

COMBINED STATEMENTS OF BUDGETARY RESOURCES

For the Years Ended September 30, 2021 and 2020
(Dollars in Thousands)

	2021	2020
BUDGETARY RESOURCES (NOTE 16)		
Unobligated balance from prior year budget authority, net	$ 6,775,933	$ 6,493,683
Appropriations	41,032,106	34,669,210
Contract authority	3,350,000	3,350,000
Spending authority from offsetting collections	11,222,619	11,280,715
Total budgetary resources	$ 62,380,658	$ 55,793,608
STATUS OF BUDGETARY RESOURCES		
New obligations and upward adjustments	$ 52,810,501	$ 49,437,939
Unobligated balance, end of year		
Apportioned, unexpired accounts	7,114,408	3,882,345
Unapportioned, unexpired accounts	2,329,956	2,303,292
Unexpired unobligated balance, end of year	9,444,364	6,185,637
Expired unobligated balance, end of year	125,793	170,032
Unobligated balance, end of year (total)	9,570,157	6,355,669
Total budgetary resources	$ 62,380,658	$ 55,793,608
OUTLAYS, NET		
Outlays, net (total)	$ 39,421,662	$ 30,761,594
Distributed offsetting receipts	(16,418,603)	(10,409,856)
Agency outlays, net	$ 23,003,059	$ 20,351,738

The accompanying notes are an integral part of these financial statements.

Notes to the Financial Statements

Note 1. Summary of Significant Accounting Policies

A. Reporting Entity

The reporting entity is a component of the U.S. Government. For this reason, some of the assets and liabilities reported by the entity may be eliminated for government-wide reporting because they are offset by assets and liabilities of another U.S. Government entity. These financial statements should be read with the realization that they are for a component of the U.S. Government.

Created in 1958, the FAA is a component of the Department of Transportation (DOT), a cabinet-level agency of the executive branch of the federal government. The FAA's mission is to provide a safe, secure, and efficient global aerospace system that contributes to national security and safety. As the leading authority in the international aviation community, the FAA is responsive to the dynamic nature of customer needs, economic conditions, and environmental concerns.

The U.S. Congress annually enacts appropriations to permit the FAA to incur obligations for specified purposes. The FAA is accountable for amounts made available per appropriations laws, from the Airport and Airway Trust Fund (AATF), revolving funds, a special fund, and the general fund. The FAA recognizes budgetary resources as assets when authorized by congressional action and apportioned by the Office of Management and Budget (OMB).

The FAA has contract authority, which allows the agency to enter into contracts prior to receiving an appropriation for the payment of obligations. A subsequently enacted appropriation provides funding to liquidate the obligations. Current contract authority is provided for the Airport Improvement Program (AIP) and funded by appropriations from the AATF.

The FAA also has spending authority from offsetting collections primarily from a non-expenditure transfer from the AATF for Operations funding. The balance of the spending authority from offsetting collections comes from other federal agencies which fund reimbursable activities performed by the FAA on their behalf.

The consolidated and combined financial statements present the accounts of all funds that have been established and maintained to account for the resources under the FAA's control. The FAA has rights and ownership of all assets reported in these financial statements. The FAA does not possess any non-entity assets.

The reporting entity is comprised of the FAA's lines of business and staff offices. For additional information, see FAA Organization on pages 10–11.

The FAA is the sponsor of the Center for Advanced Aviation System Development (CAASD), a Federally Funded Research and Development Center (FFRDC). CAASD is a disclosure entity, which is not a consolidated entity. While the FAA's financial statements include its spending for studies it contracts with CAASD, the financial statements of the FAA do not include the financial results or position of CAASD. Additional information on FAA's relationship with CAASD is presented in Note 19.

B. Basis of Presentation

The financial statements have been prepared to report the financial position, net cost of operations, changes in net position, and status and availability of budgetary resources of the FAA. The statements are a requirement of the Chief Financial Officers Act of 1990 and the Government Management Reform Act of 1994. They have been prepared from, and are fully supported by, the books and records of the FAA in accordance with OMB Circular A-136, as revised, *Financial Reporting Requirements*, and the DOT and the FAA significant accounting policies, the latter of which are summarized in this note. The statements are subjected to audit, as required by OMB Bulletin 21-04, *Audit Requirements for Federal Financial Statements*.

All material intra-agency activity has been eliminated for presentation on a consolidated basis, with a few exceptions. The Statement of Budgetary Resources is presented on a combined basis in accordance with OMB Circular A-136, as revised, *Financial Reporting Requirements*. Intra-agency activity reported in funds from dedicated collections is often offset with activity in other funds. Accordingly, funds from dedicated collections and funds from other than dedicated collections, presented separately in the Balance Sheets and Statements of Changes in Net Position, are presented on a combined basis.

Accounting standards require all reporting entities to disclose that accounting standards allow certain presentations and disclosures to be modified, if needed, to prevent the disclosure of classified information.

Unless specified otherwise, all dollar amounts are presented in thousands.

C. Basis of Accounting

The financial statements are prepared in accordance with all applicable accounting principles and standards developed and issued by the Federal Accounting Standards Advisory Board, which is recognized by the American Institute of Certified Public Accountants as the entity to establish generally accepted accounting principles for the federal government. The Federal Financial Management Improvement Act of 1996 requires the FAA to comply substantially with (1) federal financial management systems requirements, (2) applicable federal accounting standards, and (3) the United States Standard General Ledger requirements at the transaction level.

Transactions are recorded on both an accrual accounting basis and a budgetary accounting basis. Under the accrual method, revenues are recognized when earned and expenses are recognized when a liability is incurred, without regard to receipt or payment of cash. Budgetary accounting facilitates compliance with legal requirements on the use of federal funds.

D. Revenues and Other Financing Sources

As a component of the U.S. Government-wide reporting entity, the FAA is subject to the federal budget process, which involves appropriations that are provided annually and appropriations that are provided on a permanent basis. The financial transactions that are supported by budgetary resources, which include appropriations, are generally the same transactions reflected in entity and the U.S. Government-wide financial reports.

The FAA's budgetary resources reflect past congressional action and enable the entity to incur budgetary obligations, but they do not reflect assets to the U.S. Government as a whole. Budgetary obligations are legal obligations for goods, services, or amounts to be paid based on statutory provisions. After budgetary obligations are incurred, the U.S. Treasury will make disbursements to liquidate the budgetary obligations and finance those disbursements in the same way it finances all disbursements, using some combination of receipts, other inflows, and borrowing from the public (if there is a budget deficit).

The U.S. Congress enacts annual, multi-year, and no-year appropriations to be used, within statutory limits, for operating, capital, and grant expenditures. Additional amounts are obtained from service fees (e.g., landing, registry, and aviation user fees), and through reimbursements for products and services provided to domestic and foreign governmental entities, and the public.

The AATF is sustained by excise taxes that the Internal Revenue Service (IRS) collects from airway system users. Excise taxes collected are initially deposited to the General Fund of the U.S. Government. The IRS does not receive sufficient information at the time the excise taxes are collected to determine how they should be distributed to specific funds from dedicated collections. Therefore, the U.S. Treasury makes initial semi-monthly distributions to the AATF based on allocations prepared by its Office of Tax Analysis. These allocations are based on historical excise tax data applied to current excise tax receipts and later adjusted to agree to actual collections when certified by the IRS.

The CARES Act suspended the collection of almost all aviation excise taxes from March 28, 2020 through December 31, 2020.

The FAA's September 30, 2021 financial statements reflect excise taxes certified by the IRS though June 30, 2021, and excise taxes allocated by the Office of Tax Analysis for the period July 1, 2021 through September 30, 2021, in compliance with Statement of Federal Financial Accounting Standards Number 7, *Accounting for Revenue and Other Financing Sources*. Actual excise tax collections for the quarter ended September 30, 2021 will not be available from the IRS until February 2022. When actual amounts are certified by the IRS, generally four to five months after the end of each quarter, adjustments are made to the AATF to account for the difference. Additional information on this subject is disclosed in Note 13.

Interest on investments is recognized as revenue on an accrual basis, and classified as exchange or nonexchange depending on the predominant source of funds upon which the interest payment is based.

Appropriations are recognized as a financing source when expended. Revenues from services provided by the FAA associated with reimbursable agreements are recognized concurrently with the recognition of accrued expenditures for performing the services. Aviation overflight user fees are recognized as revenue in the period in which the flights take place.

Goods and services are received from other federal entities at no cost or at a cost less than the full cost to the providing federal entity. Consistent with accounting standards, certain costs of the providing entity that are not fully reimbursed by the FAA are recognized as imputed cost (in the Statement of Net Cost), and are offset by imputed financing (in the Statement of Changes in Net Position). Such imputed costs and revenues relate to business-type activities, employee benefits, and claims to be settled by the Treasury Judgment Fund. However, unreimbursed costs of goods and services other than those identified above are not included in our financial statements.

E. Taxes

The FAA, as a federal entity, is not subject to federal, state, or local income taxes and, accordingly, does not record a provision for income taxes in the accompanying financial statements.

F. Fund Balance with the U.S. Treasury

The U.S. Treasury processes cash receipts and disbursements. Funds held with the U.S. Treasury are available to pay agency liabilities. The FAA does not maintain cash in commercial bank accounts or foreign currency balances. Foreign currency payments are made either by the U.S. Treasury or the U.S. Department of State and are reported by the FAA in the U.S. dollar equivalent.

Fund balance with Treasury is an asset of the FAA and a liability of the General Fund of the U.S. Government. Similarly, investments in U.S. Government securities that are held by dedicated collections accounts are assets of the FAA and liabilities of the General Fund of the U.S. Government. In both cases, the amounts represent commitments by the government to provide resources for particular programs, but they do not represent net assets to the government as a whole.

When the FAA seeks to use fund balance with Treasury or investments in U.S. Government securities to liquidate budgetary obligations, Treasury will finance the disbursements in the same way it finances all other disbursements, using some combination of receipts, other inflows, and borrowing from the public (if there is a budget deficit).

G. Investment in U.S. Government Securities

Unexpended funds in the AATF and Aviation Insurance Revolving Fund are invested in U.S. Government securities and reported at cost. A portion of the AATF investments is liquidated monthly in amounts needed to provide cash for the FAA appropriation accounts, to the extent authorized. Aviation Insurance Revolving Fund investments are intended to be held to maturity, but may be liquidated to pay insurance claims when necessary. Investments, redemptions, and reinvestments are held and managed under the direction of the FAA by the U.S. Treasury.

H. Accounts Receivable

Accounts receivable consists of amounts owed to the FAA by other federal agencies and the public. Amounts due from federal agencies are generally the result of the provision of goods and services to other federal agencies. Accounts receivable from the public include, for example, aviation user fees, fines and penalties, reimbursements from employees, and services performed for foreign governments. Accounts receivable are presented net of an allowance for loss on uncollectible amounts, which is based on historical collection experience or an analysis of the individual receivables.

I. Inventory

Within the FAA's Administrative Services Franchise Fund (Franchise Fund), inventory is held for sale to the FAA field locations and other domestic entities and foreign governments. Inventory consists of materials and supplies that the FAA uses to support our nation's airspace system and is predominantly located at the Mike Monroney Aeronautical Center in Oklahoma City, Oklahoma. Inventory costs include material, labor, and applicable manufacturing overhead.

Inventory held for sale includes both purchased inventory and refurbished inventory. Inventory held for sale is valued using historical cost, applying the moving average cost flow method. The moving average cost flow method is an inventory costing method used in conjunction with a perpetual inventory system. A weighted average cost per unit is recomputed after every purchase. Goods sold are costed at the most recent moving average cost.

The FAA has an exchange and repair program where the FAA field locations exchange non-operational components with the Franchise Fund for operational components. The nonoperational repairable components are classified as "held for repair" and valued using the direct method. Under the direct method, inventory held for repair is valued at the same value as a serviceable item less the estimated repair costs.

Raw materials and work in progress is comprised of repairable inventory components, the materials used to bring the components to a re-useable or serviceable condition along with the labor and overhead incurred during the refurbishing process. Raw materials are valued using historical cost, applying the moving average cost flow method. The repairable components,

reported as work in progress, are valued at the same value as a serviceable item less the estimated repair costs at the time of transfer from the "held for repair" account to the work in progress account. When the refurbishing process is complete, the inventory components are reclassified to "held for sale."

Inventory may be deemed to be "excess, obsolete, and unserviceable" if, for example, the quantity exceeds projected demand for the foreseeable future or if the item has been technologically surpassed. The "excess, obsolete, and unserviceable" inventory is determined to have no residual net realizable value, therefore, a loss is recognized to write off the inventory in the current period.

J. Operating Materials and Supplies

Operating materials and supplies primarily consist of unissued materials and supplies that will be used in the repair and maintenance of FAA-owned aircraft. They are valued based on the latest acquisition cost. Operating materials and supplies are expensed using the consumption method of accounting. Under the consumption method, goods are recognized as assets upon acquisition and are expensed as they are consumed.

Operating materials and supplies "held for use" are those items that are consumed on a regular and ongoing basis. Operating materials and supplies "held for repair" are awaiting service to restore their condition to "held for use." An allowance of 50 percent has been established for operating materials and supplies "held for repair" based on historical experience.

Operating materials and supplies may be classified as "excess, obsolete, and unserviceable" if, for example, the quantity exceeds projected demand for the foreseeable future or if the item has been technologically surpassed. An allowance is established for "excess, obsolete, and unserviceable" operating materials and supplies based on the condition of various asset categories as well as the FAA's historical experience with disposing of such assets.

K. Property, Plant, and Equipment

The FAA capitalizes acquisitions of Property, Plant, and Equipment (PP&E) when the cost equals or exceeds $100 thousand (except for internal use software, for which the threshold is $200 thousand) and the useful life equals or exceeds two years. The FAA records PP&E at original acquisition cost. However, where applicable, the FAA allocates an average cost of like assets within a program, commonly referred to as "unit costing." The FAA purchases some capital assets in large quantities, which are known as "bulk purchases." If the cost per unit is below the capitalization threshold of the FAA, then these items are expensed.

Depreciation expense is calculated using the straight-line method. Depreciation commences the first month after the asset is placed in service. The FAA does not recognize residual value of its PP&E.

Real property assets, such as buildings, air traffic control towers, en route air traffic control centers, mobile buildings, roads, sidewalks, parking lots, and other structures, are depreciated over a useful life of up to 40 years.

Personal property assets, such as aircraft; decision support systems; navigation-, surveillance-, communications-, and weather-related equipment; office furniture; vehicles and office equipment, are depreciated over a useful life of up to 20 years.

Internal use software, such as software used to operate programmatic and administrative information systems, is generally amortized over a useful life of five years. However, it may be adjusted if a determination is made by specific program office and/or subject matter experts to have a longer or shorter useful life (not less than two years).

Construction in progress and internal use software in development are valued at actual direct costs plus applied overhead and other indirect costs.

The FAA researches and develops new technologies to support the nation's airspace system. Until such time as a research and development project reaches "technological feasibility," the costs associated with the project are expensed in the year incurred.

L. Leases

The FAA occupies certain real property that is leased by the DOT from the General Services Administration (GSA). The FAA also has non-GSA leases. Payments made by the FAA are based on contractual agreements. Future payments are disclosed for both cancellable and non-cancellable operating leases, but not disclosed separately since most lease agreements are either cancellable or contain termination rights.

Capital leases for buildings and equipment are amortized over the lease term. If the lease agreement contains a bargain purchase option or otherwise provides for transferring title of the asset to the FAA, the buildings are depreciated over a 40-year service life and the equipment is depreciated over its estimated useful life.

M. Prepaid Charges

The FAA generally does not pay for goods and services in advance, except for certain reimbursable agreements, subscriptions, and payments to contractors and employees. Payments made in advance of the receipt of goods and services are recorded as prepaid charges at the time of prepayment and recognized as expenses when the related goods and services are received.

N. Liabilities

Liabilities covered by budgetary or other resources are those liabilities for which the U.S. Congress has appropriated funds, and which are otherwise available to pay amounts due. Liabilities not covered by budgetary or other resources represent amounts owed in excess of available, congressionally-appropriated funds or other amounts. The liquidation of liabilities not covered by budgetary or other resources is dependent on future congressional appropriations or other funding, including the AATF. Liabilities not requiring budgetary resources include custodial liabilities which are collections on behalf of other federal entities or funds, such as the General Fund of the U.S. Government. Custodial liabilities are liquidated when the collections are transferred to the owner. Intragovernmental liabilities are claims against the FAA by other federal agencies.

O. Accounts Payable

Accounts payable are amounts that the FAA owes to other federal agencies and the public. Accounts payable to federal agencies generally consist of amounts due under interagency reimbursable agreements. Accounts payable to the public primarily consist of unpaid goods and services received by the FAA in support of our nation's airspace system.

P. Annual, Sick, and Other Leave

Annual leave is accrued as it is earned and the accrual is reduced as leave is taken. For each biweekly pay period, the balance in the accrued annual leave account is adjusted to reflect the latest pay rates and unused hours of leave. Liabilities associated with other types of vested leave, including compensatory, credit hours, restored leave, and sick leave in certain circumstances, are accrued based on latest pay rates and unused hours of leave. Sick leave is generally non-vested, except for sick leave balances at retirement under the terms of certain union agreements. Funding will be obtained from future financing sources to the extent that current or prior year appropriations are not available to fund annual and other types of vested leave earned but not taken. Non-vested leave is expensed when used.

Q. Federal Employees' Compensation Act

The Federal Employees' Compensation Act (FECA) (Public Law 103-3) provides income and medical cost protection to covered federal civilian employees injured on the job, to employees who have incurred work-related occupational diseases, and to beneficiaries of employees whose deaths are attributable to job-related injuries or occupational diseases.

The FECA program is administered by the Department of Labor (DOL), which pays valid claims and subsequently seeks reimbursement from the FAA for these paid claims. The FECA liability consists of two elements. The first element, accrued FECA liability, is based on workers' compensation claims paid by DOL but not yet reimbursed by the FAA. The FAA reimburses DOL for claims as funds are appropriated for this purpose. In general, there is a two-year period between payment by DOL and reimbursement to DOL by the FAA. As a result, the FAA recognizes an intragovernmental liability for the claims paid by DOL and not yet reimbursed by the FAA.

The second element, actuarial FECA liability, is the estimated liability for future benefit payments. The actuarial FECA liability includes the expected liability for death, disability, medical, and miscellaneous costs for approved compensation cases, plus a component for incurred but unreported claims. DOL determines the actuarial FECA liability annually, as of September 30, using an actuarial method that considers historical benefit payment patterns, wage inflation factors, medical inflation factors, and other variables. The projected annual benefit payments are discounted to present value using the OMB economic assumptions for 10-year Treasury notes and bonds. The DOL calculates the FECA liability for the DOT, and the DOT allocates the liability amount to the FAA, based on actual workers' compensation payments to FAA employees over the preceding four years. The actuarial FECA liability is not covered by budgetary resources and will require future funding.

R. Retirement Plan

FAA employees participate in either the Civil Service Retirement System (CSRS) or the Federal Employees Retirement System (FERS). The employees who participate in the CSRS contribute seven percent of their pay and are beneficiaries of the FAA's matching contribution program, equal to seven percent of pay, distributed to their annuity account in the Civil Service Retirement and Disability Fund.

FERS went into effect on January 1, 1987. FERS and Social Security automatically cover most employees hired after December 31, 1983. Employees hired prior to January 1, 1984 could elect either to join FERS and Social Security or to

remain in CSRS. FERS offers a savings plan to which the FAA automatically contributes one percent of pay and matches any employee contribution up to an additional four percent of pay. For FERS participants, the FAA also contributes the employer's matching share for Social Security. The FAA's matching contributions are recognized as operating expenses.

The FAA recognizes the full cost of pensions and other retirement benefits during an employee's active years of service. The costs are covered through a combination of FAA appropriations and imputed costs. The imputed amount is calculated using the Office of Personnel Management's (OPM) cost factors and is the difference between the FAA's and the employee's contributions during the year and the total cost of the benefit. OPM actuaries determine pension cost factors by calculating the value of pension benefits expected to be paid in the future and communicate these factors to the FAA.

The OPM also provides information regarding the full cost of health and life insurance benefits. The imputed costs are completely offset with other financing sources, which are reported as an imputed financing source on the Consolidated Statements of Changes in Net Position to the extent that these costs will be paid by the OPM. Reporting of the assets and liabilities associated with the retirement plans is the responsibility of the administering agency, OPM. Therefore, the FAA does not report CSRS or FERS assets, accumulated plan benefits, or unfunded liabilities, if any, applicable to employees.

S. Grants

The FAA records an obligation at the time a grant is awarded. As grant recipients conduct eligible activities under the terms of their grant agreement, they request payment by the FAA, typically made via an electronic payment process. Expenses are recorded at the time of payment approval during the year. The FAA also recognizes an accrued liability and expense for estimated eligible grant payments not yet requested by grant recipients. Grant expenses, including associated administrative costs, are classified on the Consolidated Statements of Net Cost under the Airports line of business.

T. Use of Estimates

Management has made certain estimates and assumptions when reporting assets, liabilities, revenues, and expenses, and in the note disclosures. Actual results could differ from these estimates. Significant estimates underlying the accompanying financial statements include: (a) legal, environmental, and contingent liabilities; (b) accruals of accounts and grants payable; (c) allowance for doubtful accounts receivable; (d) allowances for operating materials and supplies; (e) allocations of common costs to construction in progress; (f) the allocation of an average cost of like property, plant, and equipment within a program, commonly referred to as unit costing; and (g) accrued benefits and benefits payable.

U. Environmental and Disposal Liabilities

In compliance with applicable laws and regulations including the Clean Air Act of 1963, the Resource Conservation and Recovery Act of 1976, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986 and the Community Environmental Response Facilitation Act of 1992, the FAA recognizes two types of environmental and disposal liabilities: environmental remediation, and cleanup and decommissioning.

The liability for environmental remediation is an estimate of costs necessary to bring a known contaminated site into compliance with applicable environmental standards. The increase or decrease in the annual liability is charged to current year expense.

The liability for environmental cleanup and decommissioning is the estimated cost that will be incurred to remove, contain, and/or dispose of hazardous materials when an asset presently in service is shutdown. The FAA estimates the environmental cleanup and decommissioning costs at the time that an FAA-owned asset is placed in service. For assets placed in service through FY 1998, the increase or decrease in the estimated environmental cleanup liability is charged to expense. Assets placed in service in FY 1999 and after do not contain any known hazardous materials, and therefore do not have associated environmental liabilities.

There are no known possible changes to these estimates based on inflation, deflation, technology, or applicable laws and regulations.

V. Contingencies

A contingent liability represents a potential cost to the FAA depending on the outcome of future events. Three categories of contingent liabilities — probable, reasonably possible, and remote — determine the appropriate accounting treatment. The FAA recognizes contingent liabilities, in the accompanying balance sheet and statement of net cost, when they are both probable and can be reasonably estimated. The FAA discloses contingent liabilities in the notes to the financial statements (see Note 12) when the conditions for liability recognition are

not met but are reasonably possible. Contingent liabilities that are considered remote are not disclosed.

In some cases, once losses are certain, payments may be made from the Judgment Fund maintained by the U.S. Treasury rather than from the amounts appropriated to the FAA for agency operations. Payments from the Judgment Fund are recorded as "Imputed Financing" when made.

W. Funds from Dedicated Collections

The FAA's financial statements include the following funds, considered to be "funds from dedicated collections":

- AATF
- Operations-AATF
- Operations-General Fund
- Grants-in-Aid for Airports
- Facilities and Equipment
- Research, Engineering, and Development
- Aviation Insurance Fund
- Aviation User Fees

Funds from dedicated collections are those that are financed by specifically identified revenues and financing sources which remain available over time. They are required by statute to be used for designated activities, benefits, or purposes and must be accounted for separately from the government's general revenues.

The AATF is funded by excise taxes that the IRS collects from airway system users. These receipts are unavailable until appropriated by the U.S. Congress. Once appropriated for use, the FAA transfers the AATF receipts necessary to meet cash disbursement needs to several other funds, from which expenditures are made. Those funds that receive transfers from the AATF are the Operations-AATF, Grants-in-Aid for Airports, Facilities and Equipment, and Research, Engineering and Development. These funds represent the majority of the FAA annual expenditures.

In addition, while the Operations-General Fund is primarily funded through transfers from Operations-AATF, it is also supplemented by funding from the General Fund of the U.S. Government through annual appropriations. Because the Operations-General Fund is primarily funded from the AATF, and because it is not reasonably possible to differentiate cash balances between those originally flowing from the AATF versus those that come from general fund appropriations, the Operations-General Fund is presented as funds from dedicated collections.

Similarly, while the Grants-in-Aid for Airports account is typically funded through transfers from the AATF, it was also supplemented by funding from the General Fund of the U.S. Government as a result of the Coronavirus Aid, Relief, and Economic Security (CARES) Act, Public Law 116-136. Because the funding from general fund appropriations is expected to be temporary and the predominant source of funding historically comes from the AATF, Grants-in-Aid for Airports is presented as funds from dedicated collections.

The funds from dedicated collections in the Facilities and Equipment fund are used to purchase or construct PP&E. When PP&E has been placed in service, the funds from dedicated collections are no longer available for future expenditure, have been used for their intended purpose, and are therefore classified as "funds from other than dedicated collections" on the balance sheet and the statement of changes in net position. Construction in progress is classified as "funds from dedicated collections" because although the funds have been expended, they have not yet fully achieved their intended purpose. The intended result of this presentation is to differentiate between funds from dedicated collections that remain available for future expenditure, or have not yet fully achieved their designated purpose, and funds from dedicated collections previously expended that have achieved their intended purpose.

Additional disclosures concerning funds from dedicated collections can be found in Note 13.

X. Reclassifications

Certain prior year amounts have been reclassified for consistency with the current year presentation.

The format of the Balance Sheet has changed to reflect more detail for certain line items, as required for all significant reporting entities by OMB Circular A-136. This change does not affect totals for assets, liabilities, or net position and is intended to allow readers of this report to see how the amounts shown on the Balance Sheet are reflected on the Government-wide Balance Sheet, thereby supporting the preparation and audit of the *Financial Report of the United States Government*. The presentation of the fiscal year 2020 Balance Sheet was modified to be consistent with the fiscal year 2021 presentation.

Note 2. Fund Balance with Treasury

Status of fund balance with Treasury balances as of September 30, 2021 and 2020 were:

(Dollars in Thousands)	2021	2020
Status of fund balance with Treasury		
Unobligated balance		
Available	$ 7,114,408	$ 3,882,345
Not available	2,455,749	2,473,324
Obligated balance not yet disbursed	18,804,450	17,154,870
Investments and contract authority supporting obligated and unobligated balances	(15,182,111)	(12,520,542)
Non-budgetary fund balance with Treasury	3,967	5,648
Total	$ 13,196,463	$ 10,995,645

Unobligated budgetary account balances are also reflected on the Statement of Budgetary Resources. Certain unobligated balances may be restricted to future use and are not available for current use. For additional information, see Legal Arrangements Affecting the Use of Unobligated Balances in Note 16.

Obligated balances not yet disbursed include unpaid obligations offset by uncollected customer payments from other U.S. federal government entities.

The FAA is funded with appropriations from the AATF and the General Fund of the U.S. Government. While amounts appropriated from the General Fund of the U.S. Government are included in fund balance with Treasury, AATF investments are not. AATF investments are redeemed, as needed, to meet FAA's cash disbursement needs, at which time the funds are transferred into fund balance with Treasury. The FAA also receives contract authority that allows obligations to be incurred in advance of an appropriation. The contract authority is subsequently funded, as authorized, from the AATF allowing for the liquidation of the related obligations.

Thus, investments and contract authority are not part of fund balance with Treasury; however, their balances will be transferred from the AATF to fund balance with Treasury over time to liquidate obligated balances and unobligated balances as they become obligated, and thus are necessarily included in the Status of fund balance with Treasury. Only the investment and contract authority balances that support the obligated and unobligated balances are presented in this note. Whereas, the investment balances presented in Note 3 also include amounts invested from receipts that are unavailable for obligation upon collection, and therefore do not support the obligated and unobligated balances.

As of September 30, 2021 and 2020, the unused funds in expired appropriations that were returned to Treasury at the end of the fiscal year were $50.2 million and $57.7 million, respectively. These balances are excluded from amounts reported as fund balance with Treasury.

Note 3. Investments, Net

As of September 30, 2021 and 2020, the FAA's investment balances were as follows:

(Dollars in Thousands)	2021				
Intragovernmental Securities	Cost	Unamortized Premium/ (Amortized Discount)	Interest Receivable	Investments (Net)	Market/Fair Value
Nonmarketable par value	$ 15,901,898	$ –	$ 47,043	$ 15,948,941	$ 15,901,898
Nonmarketable market-based	2,217,198	13,213	10,304	2,240,715	2,240,042
Total intragovernmental securities	$ 18,119,096	$ 13,213	$ 57,347	$ 18,189,656	$ 18,141,940

(Dollars in Thousands)	2020				
Intragovernmental Securities	Cost	Unamortized Premium/ (Amortized Discount)	Interest Receivable	Investments (Net)	Market/Fair Value
Nonmarketable par value	$ 7,900,279	$ –	$ 34,552	$ 7,934,831	$ 7,900,279
Nonmarketable market-based	2,302,424	12,082	10,591	2,325,097	2,335,706
Total intragovernmental securities	$ 10,202,703	$ 12,082	$ 45,143	$ 10,259,928	$ 10,235,985

The Secretary of the Treasury invests AATF funds on behalf of the FAA. The FAA investments are considered investment authority and are available to offset the cost of operations to the extent authorized by the U.S. Congress. As of September 30, 2021 and 2020, $15.9 billion and $7.9 billion were invested respectively in U.S. Treasury Certificates of Indebtedness. Nonmarketable par value Treasury securities are special series debt securities that the U.S. Treasury issues to federal entities at face value (par value). The securities are redeemed at face value on demand; thus investing entities recover the full amounts invested plus interest. Investments as of September 30, 2021, mature on various dates through June 30, 2022, and investments as of September 30, 2020, matured on various dates through June 30, 2021. The annual rate of return on Certificates of Indebtedness is established in the month of issuance. The average rate of return for certificates issued during FY 2021 and FY 2020 was 1.38 percent and 1.75 percent, respectively.

Nonmarketable, market-based Treasury securities are debt securities that the Treasury issues to federal entities without statutorily fixed interest rates. Although the securities are not marketable, their terms (prices and interest rates) mirror the terms of marketable Treasury securities. The FAA invests Aviation Insurance Fund collections in nonmarketable market-based securities and amortizes premiums and discounts over the life of the security using the interest method. As of September 30, 2021, these nonmarketable, market-based securities have maturity dates ranging from January 15, 2022 to January 31, 2023 and have an average rate of return of approximately 1.4 percent. As of September 30, 2020, these nonmarketable, market-based securities had maturity dates ranging from November 15, 2020 to January 31, 2023 and had an average rate of return of approximately 1.8 percent.

The U.S. Treasury does not set aside assets to pay the future expenditures of the AATF and the Aviation Insurance Fund (i.e., dedicated collections). Instead, the cash collected from the public for the AATF and the Aviation Insurance Fund is deposited in the U.S. Treasury, and used for general government purposes. Treasury securities are issued to the FAA as evidence of the collections by the AATF and the Aviation Insurance Fund. Treasury securities are an asset to the FAA and a liability to the U.S. Treasury. Because the FAA and the U.S. Treasury are both parts of the federal government, these assets and liabilities offset each other from the standpoint of the federal government as a whole. For this reason, they do not represent an asset or a liability in the government-wide financial statements.

To the extent authorized by law, the FAA has the ability to redeem its Treasury securities to make expenditures. When the FAA redeems these securities, the federal government finances those expenditures from accumulated cash balances by raising tax or other receipts, borrowing from the public, repaying less debt, or curtailing other expenditures. This is the same manner in which the federal government finances all other expenditures.

The FAA does not have any investment in non-federal securities.

Note 4. Accounts Receivable, Net

Accounts receivable is shown net of an allowance for uncollectible accounts, which is based on historical collection experience or an analysis of the individual receivables. As of September 30, 2021 and 2020, accounts receivable were:

(Dollars in Thousands)	2021	2020
Intragovernmental		
Accounts receivable, gross	$ 13,523	$ 18,409
Allowance for uncollectible amounts	(1,151)	(1,664)
Total intragovernmental	12,372	16,745
Other than intragovernmental/with the public		
Accounts receivable, gross	45,252	44,141
Allowance for uncollectible amounts	(14,944)	(14,102)
Total other than intragovernmental/with the public	30,308	30,039
Total accounts receivable, net	$ 42,680	$ 46,784

Note 5. Inventory and Related Property, Net

Inventory is classified as either held for sale, held for repair, or raw materials and work in progress. Collectively, the FAA's inventory is used to support our nation's airspace system and is predominantly located at the Mike Monroney Aeronautical Center in Oklahoma City, Oklahoma. Inventory that is deemed to be excess, obsolete and unserviceable is expected to have no net realizable value and a loss is recognized for the carrying amount. The carrying amount before identification as excess, obsolete, and unserviceable inventory was $6.2 million in fiscal year 2021 and $3.1 million in fiscal year 2020.

Operating materials and supplies primarily consists of materials and supplies that will be used in the repair and maintenance of FAA-owned aircraft. As of September 30, 2021 and 2020, inventory and related property balances were:

(Dollars in Thousands)	2021		
	Cost	Allowance	Net
Inventory			
Held for sale	$ 263,246	$ –	$ 263,246
Held for repair	433,515	–	433,515
Raw materials and work in progress	38,539	–	38,539
Inventory total	735,300	–	735,300
Operating materials and supplies			
Held for use	49,850	–	49,850
Held for repair	48,599	(24,299)	24,300
Excess, obsolete, and unserviceable	2,849	(1,635)	1,214
Operating materials and supplies total	101,298	(25,934)	75,364
Total inventory and related property	$ 836,598	$ (25,934)	$ 810,664

(Dollars in Thousands)	2020		
	Cost	Allowance	Net
Inventory			
Held for sale	$ 264,559	$ –	$ 264,559
Held for repair	431,067	–	431,067
Raw materials and work in progress	39,833	–	39,833
Inventory total	735,459	–	735,459
Operating materials and supplies			
Held for use	54,663	–	54,663
Held for repair	39,045	(19,522)	19,523
Excess, obsolete, and unserviceable	4,097	(2,574)	1,523
Operating materials and supplies total	97,805	(22,096)	75,709
Total inventory and related property	$ 833,264	$ (22,096)	$ 811,168

Note 6. General Property, Plant, and Equipment, Net

General property, plant, and equipment balances as of September 30, 2021 and 2020 were:

(Dollars in Thousands)

Class of fixed asset	2021 Acquisition value	2021 Accumulated depreciation	2021 Net book value
Real property, including land	$ 6,906,994	$ (4,047,003)	$ 2,859,991
Personal property	18,642,947	(14,050,068)	4,592,879
Internal use software	3,760,750	(2,713,304)	1,047,446
Internal use software in development	1,284,383	–	1,284,383
Assets under capital lease (Note 11)	94,988	(55,605)	39,383
Construction in progress	1,845,926	–	1,845,926
Total property, plant, and equipment	$ 32,535,988	$ (20,865,980)	$ 11,670,008

(Dollars in Thousands)

Class of fixed asset	2020 Acquisition value	2020 Accumulated depreciation	2020 Net book value
Real property, including land	$ 6,779,022	$ (3,895,755)	$ 2,883,267
Personal property	18,467,959	(13,376,239)	5,091,720
Internal use software	3,532,469	(2,458,540)	1,073,929
Internal use software in development	1,096,142	–	1,096,142
Assets under capital lease (Note 11)	94,988	(52,039)	42,949
Construction in progress	1,729,689	–	1,729,689
Total property, plant, and equipment	$ 31,700,269	$ (19,782,573)	$ 11,917,696

The changes to the general property, plant, and equipment balance for the fiscal years ended September 30, 2021 and September 30, 2020 were:

(Dollars in Thousands)

	2021	2020
Balance beginning of the year	$ 11,917,696	$ 12,045,969
Capitalized acquisitions	1,182,409	1,304,029
Dispositions	(1,081)	(75,945)
Revaluations	(156,837)	(62,756)
Depreciation expense	(1,313,052)	(1,336,609)
Transfers-in/out without reimbursement	15,170	7,148
Donations	25,703	35,860
Balance at end of year	$ 11,670,008	$ 11,917,696

The FAA's construction in progress relates primarily to national airspace assets, which are derived from centrally funded national systems development contracts, site preparation and testing, raw materials, and internal labor charges. The accumulation of costs to be capitalized for assets in the FAA's PP&E typically flow into and remain in the construction in progress account until the asset is ready for deployment and placed in service. Once placed in service, the asset balance is transferred from the construction in progress category to its respective asset category.

Note 7. Other Assets

Other asset balances as of September 30, 2021 and 2020 were:

(Dollars in Thousands)	2021	2020
Other than intragovernmental/with the public		
General property, plant, and equipment permanently removed but not yet disposed	$ –	$ 27
Total other than intragovernmental/with the public	–	27
Total other assets	$ –	$ 27

Note 8. Liabilities not Covered by Budgetary Resources

Liabilities not covered by budgetary resources require future congressional action whereas liabilities covered by budgetary resources reflect prior congressional action. Regardless of when the congressional action occurs, when the liabilities are liquidated, Treasury will finance the liquidation in the same way that it finances all other disbursements, using some combination of receipts, other inflows, and borrowing from the public (if there is a budget deficit). Liabilities not requiring budgetary resources include custodial liabilities which are collections on behalf of other federal entities or funds, such as the General Fund of the U.S. Government. Custodial liabilities are liquidated when the collections are transferred to the owner. The following table shows liabilities not covered by budgetary resources as of September 30, 2021 and 2020.

(Dollars in Thousands)	2021	2020
Intragovernmental		
Other liabilities (Note 10)		
Federal Employees' Compensation Act payable	$ 147,477	$ 153,091
Other unfunded employment related liabilities	28,878	30,095
Deposit funds and clearing accounts	–	4,182
Total intragovernmental	176,355	187,368
Other than intragovernmental/with the public		
Federal employee benefits payable		
FECA actuarial	713,087	727,770
Unfunded leave	553,301	556,071
Other unfunded employment related liability	47,888	47,212
Environmental and disposal liabilities (Notes 9 and 12)	752,148	745,540
Other liabilities		
Capital leases (Notes 10 and 11)	45,344	51,348
Legal claims (Notes 10 and 12)	52,009	57,251
Other accrued liabilities (Note 10)	13,782	9,656
Total other than intragovernmental/with the public	2,177,559	2,194,848
Total liabilities not covered by budgetary resources	$ 2,353,914	$ 2,382,216
Total liabilities not covered by budgetary resources	$ 2,353,914	$ 2,382,216
Total liabilities covered by budgetary resources	8,510,340	6,412,870
Total liabilities not requiring budgetary resources	18,604	15,921
Total liabilities	$ 10,882,858	$ 8,811,007

Note 9. Environmental and Disposal Liabilities

The FAA's environmental and disposal liabilities as of September 30, 2021 and 2020 were:

(Dollars in Thousands)	2021	2020
Environmental remediation	$ 276,341	$ 264,193
Environmental cleanup and decommissioning	475,807	481,347
Total environmental and disposal liabilities	$ 752,148	$ 745,540

Remediation is performed at contaminated sites where the FAA has liability due to past operations or waste disposal activities. To help manage the cleanup of the contaminated sites, the FAA established an Environmental Cleanup Program that includes three service areas, which are responsible for oversight of the contaminated sites. The service area personnel use both actual costs and an automated, parametric cost-estimating tool that provides estimates for all phases of investigation and remediation to estimate the environmental remediation liability.

The Environmental cleanup and decommissioning liability is estimated using a combination of actual costs and project specific cost proposals for certain targeted facilities. The FAA uses the average decommissioning and cleanup costs of the targeted facilities as the cost basis for the other like facilities to arrive at the estimated environmental liability for decommissioning and cleanup.

A description of the two categories of environmental liabilities can be found in Note 1U. Information on contingencies related to environmental liabilities can be found in Note 12.

Environmental and disposal liabilities are not covered by budgetary or other resources and thus will require future appropriated funding.

Note 10. Other Liabilities

As of September 30, 2021, the FAA's other liabilities were:

(Dollars in Thousands)	2021		
	Non-current liabilities	Current liabilities	Total
Intragovernmental			
Accrued payroll & benefits payable to other agencies	$ –	$ 118,241	$ 118,241
Liabilities covered by budgetary resources	–	118,241	118,241
Federal Employees' Compensation Act payable	79,727	67,750	147,477
Other unfunded employment related liabilities	–	28,878	28,878
Deposit funds and clearing accounts	–	–	–
Liabilities not covered by budgetary resources	79,727	96,628	176,355
Custodial liabilities	–	18,604	18,604
Liabilities not requiring budgetary resources	–	18,604	18,604
Intragovernmental total	79,727	233,473	313,200
Other than intragovernmental/with the public			
Accrued funded payroll and leave	–	336,719	336,719
Liabilities covered by budgetary resources	–	336,719	336,719
Capital leases (Notes 8 and 11)	37,285	8,059	45,344
Legal claims	–	52,009	52,009
Other	–	13,782	13,782
Liabilities not covered by budgetary resources	37,285	73,850	111,135
Other than intragovernmental/with the public total	37,285	410,569	447,854
Total other liabilities	$ 117,012	$ 644,042	$ 761,054

As of September 30, 2020, the FAA's other liabilities were:

(Dollars in Thousands)	2020		
	Non-current liabilities	Current liabilities	Total
Intragovernmental			
Accrued payroll & benefits payable to other agencies	$ –	$ 103,456	$ 103,456
Liabilities covered by budgetary resources	–	103,456	103,456
Federal Employees' Compensation Act payable	82,854	70,237	153,091
Other unfunded employment related liabilities	–	30,095	30,095
Deposit funds and clearing accounts	–	4,182	4,182
Liabilities not covered by budgetary resources	82,854	104,514	187,368
Custodial liabilities	–	15,921	15,921
Liabilities not requiring budgetary resources	–	15,921	15,921
Intragovernmental total	82,854	223,891	306,745
Other than intragovernmental/with the public			
Accrued funded payroll and leave	–	299,220	299,220
Liabilities covered by budgetary resources	–	299,220	299,220
Capital leases (Notes 8 and 11)	43,305	8,043	51,348
Legal claims	–	57,251	57,251
Other	–	9,656	9,656
Liabilities not covered by budgetary resources	43,305	74,950	118,255
Other than intragovernmental/with the public total	43,305	374,170	417,475
Total other liabilities	$ 126,159	$ 598,061	$ 724,220

Accrued payroll and benefits payable to other agencies consists of FAA contributions payable to other federal agencies for employee benefits. These include FAA contributions payable toward life insurance, health insurance, retirement benefits, Social Security, and matching contributions to the Thrift Savings Plan. The Thrift Savings Plan is a tax-deferred retirement savings and investment plan available to federal employees. These benefits also include FAA contributions payable for the Federal Insurance Contributions Act taxes, which are composed of the old-age, survivors, and disability insurance taxes, also known as social security taxes, and the hospital insurance tax, also known as Medicare tax.

An unfunded liability is recorded for the actual cost of workers' compensation benefits to be reimbursed to the DOL, pursuant to the FECA. Reimbursement to the DOL occurs approximately two years subsequent to the actual disbursement. Budgetary resources for this intragovernmental liability are made available to the FAA as part of its annual appropriation from the U.S. Congress in the year in which the reimbursement takes place.

The FAA's accrued liability as of September 30, 2021, includes workers' compensation benefits paid by DOL during the periods July 1, 2019 through June 30, 2021, and accrued liabilities for the quarter July 1, 2021 through September 30, 2021. The FAA's accrued liability as of September 30, 2020, included workers' compensation benefits paid by the DOL during the period July 1, 2018 through June 30, 2020, and accrued liabilities for the quarter July 1, 2020 through September 30, 2020.

The FAA estimated that 100 percent of its $52.0 million and $57.3 million legal claims liabilities as of September 30, 2021 and 2020, respectively, would be paid from the permanent appropriation for judgments, awards, and compromise settlements (Judgment Fund) administered by the Department of Treasury.

Other accrued liabilities with the public are composed primarily of deposit funds and clearing accounts.

Total liabilities not covered by budgetary resources are presented in Note 8.

Note 11. Leases

Entity as Lessee

The FAA is the lessee for both capital and operating leases.

Capital Leases

Following is a summary of the FAA's assets under capital lease as of September 30, 2021 and 2020:

(Dollars in Thousands)	2021	2020
Non-Federal		
Land, buildings, and machinery	$ 94,988	$ 94,988
Accumulated depreciation	(55,605)	(52,039)
Non-Federal assets under capital lease, net	39,383	42,949
Total assets under capital lease, net	$ 39,383	$ 42,949

As of September 30, 2021, the FAA's future payments due on assets under capital lease were:

(Dollars in Thousands)

Future payments due by fiscal year (Liabilities not covered by budgetary or other resources)	
Year 1 (FY 2022)	$ 8,059
Year 2 (FY 2023)	8,038
Year 3 (FY 2024)	7,891
Year 4 (FY 2025)	7,238
Year 5 (FY 2026)	6,701
After 5 Years	14,893
Total future payments	52,820
Less: Imputed interest	(7,476)
Net capital lease liability	$ 45,344

As of September 30, 2021, all future payments due on assets under capital lease were non-federal.

The FAA's capital lease payments are authorized to be funded annually as codified in the 49 U.S.C. 40110(c)(1) which addresses general procurement authority. The remaining principal payments are recorded as unfunded lease liabilities. The imputed interest is funded and expensed annually. The lease terms for capital leases expire at various dates through FY 2039.

Operating Leases

The FAA has operating leases for real property, aircraft, and telecommunications equipment. Future operating lease payments due as of September 30, 2021, were:

(Dollars in Thousands)

Fiscal year	Federal	Non-Federal	Total
Year 1 (FY 2022)	$ 102,920	$ 80,002	$ 182,922
Year 2 (FY 2023)	98,501	60,722	159,223
Year 3 (FY 2024)	91,277	32,689	123,966
Year 4 (FY 2025)	86,905	26,916	113,821
Year 5 (FY 2026)	87,509	23,347	110,856
After 5 Years	378,231	81,026	459,257
Total future operating lease payments	$ 845,343	$ 304,702	$ 1,150,045

Operating lease expense incurred during the year ended September 30, 2021 was $197.9 million, of which $107.8 million was federal and $90.1 million was non-federal. Operating lease expense incurred during the year ended September 30, 2020 was $197.4 million, of which $120.7 million was federal and $76.7 million was non-federal. Federal operating leases include General Services Administration leases that have a short termination privilege. However, the FAA intends to remain in the lease. The operating lease amounts due after five years do not include estimated payments for leases with annual renewal options. The lease terms for operating leases expire at various dates through FY 2043. Estimates of the lease termination dates are subjective, and any projection of future lease payments would be arbitrary.

Note 12. Commitments, Contingencies, and Other Disclosures

Continuing Resolution and Reauthorization. Effective October 1, 2021, the FAA is operating under a continuing resolution, Public Law 117-43, for its FY 2022 appropriation and many of its programmatic and financing authorities. The continuing resolution will be in effect through December 3, 2021, unless superseded by enactment of specified appropriations legislation and includes a provision that allows the FAA to continue spending at FY 2021 rates.

In addition, the passage of the FAA Reauthorization Act of 2018, Public Law 115-254, authorizes the FAA's programmatic and financing authorities, the Airport Improvement Program contract authority, and the authority to collect and deposit excise taxes into and make expenditures from the AATF. The new authority expires on September 30, 2023.

Airport Improvement Program. The Airport Improvement Program provides grants for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems. Eligible projects generally include improvements that address airport safety, capacity, security, and environmental concerns. The FAA's share of eligible costs for large and medium primary hub airports is 75 percent, with the exception of noise program implementation, for which the FAA's share is 80 percent. For remaining airports (small primary, reliever, and general aviation), the FAA's share of eligible costs is 90 percent. However, the CARES Act provided funding for the FAA to pay a Federal share of the costs for grants awarded under Public Law 116-94, Further Consolidated Appropriations Act, 2020, to 100 percent. Similarly, the American Rescue Plan Act of 2021 provided funding for the FAA to pay a Federal share of 100 percent of the costs for any grant awarded in fiscal years 2021 or 2020, for an airport development project.

The FAA has authority under 49 U.S.C. 47110(e) to issue letters of intent to enter into a series of annual Airport Improvement Program grant agreements. The FAA records an obligation when a grant is awarded. As of September 30, 2021, the FAA had letters of intent extending through FY 2026 totaling $7.2 billion. As of September 30, 2021, the FAA had obligated $7.0 billion of this total amount, leaving $209 million unobligated.

As of September 30, 2020, the FAA had letters of intent extending through FY 2026 totaling $7.3 billion. As of September 30, 2020, the FAA had obligated $6.9 billion of this total amount, leaving $323 million unobligated.

Aviation Insurance Program. The FAA provides non-premium war risk insurance for certain U.S. Government contracted operations as permitted by 49 U.S.C. 44305. Coverage is provided without premium to air carriers at the written request of other U.S. Government agencies. The scope of coverage under the Non-Premium War Risk Insurance program includes hull, bodily injury, personal injury, and property damage. The FAA is currently providing coverage for certain U.S. Department of Defense (DOD) contracted air carrier operations.

Because insurance policies are issued only at the request of other federal departments and agencies, total coverage-in-force fluctuates throughout the fiscal year. The coverage-in-force at any given point in time does not represent a potential liability against the Aviation Insurance Revolving Fund because the Secretary of Defense has entered into an indemnity agreement with the Secretary of Transportation and will fully reimburse the Fund for all losses paid by the FAA on behalf of DOD.

Contingencies. The FAA has the following contingencies as of September 30, 2021 and 2020:

- **Legal Contingencies.** The FAA's legal contingencies include asserted and pending legal claims. An accrued liability is recognized for legal claims where the loss is probable and the amount can be reasonably estimated. For pending legal claims where the loss is reasonably possible, a liability is not recognized, however, the estimated range of loss is disclosed in the following table. There are other claims that could result in significant pay-outs; however, it is not possible at this time to determine the probability of an unfavorable outcome, or to estimate the amount of potential loss in the event of such an outcome.
- **Environmental Contingencies.** The FAA's environmental contingencies include environmental remediation, and environmental clean-up and decommissioning. The nature of these contingencies is described in Note 1U. An accrued liability is recognized for environmental contingencies where the loss is probable and the amount can be reasonably estimated. For environmental contingencies where the loss is reasonably possible, a liability is not recognized, however, the estimated range of loss is disclosed in the following table. FAA is a party to environmental remediation sites in Alaska, the Pacific Islands, and New Jersey, in which the extent of liability is not both probable and reasonably estimable. As a result, a liability is not recognized for these sites without further studies and negotiations with other federal agencies.

- **Warranty Contingencies.** The FAA's logistics center issues parts to customers with a 90-day warranty, that are replaced free of charge if warranty conditions are met. An accrued liability is recognized for warranty contingencies where the loss is probable and the amount can be reasonably estimated. The loss contingency is estimated based on historical averages of parts that failed and the warranty claims were approved. A loss contingency is not estimated for warranty claims that are reasonably possible of loss.

The following table shows the loss contingencies as of September 30, 2021 and 2020:

(Dollars in Thousands)	2021			2020		
	Accrued Liabilities	Estimated Range of Loss		Accrued Liabilities	Estimated Range of Loss	
		Lower End	Upper End		Lower End	Upper End
Legal Contingencies:						
Probable	$ 52,009	$ 52,009	$ 52,009	$ 57,251	$ 57,251	$ 57,251
Reasonably Possible	N/A	$ 76,583	$ 76,583	N/A	$ 222,331	$ 222,331
Environmental Contingencies:						
Probable	$ 752,148	$ 752,148	$ 752,148	$ 745,540	$ 745,540	$ 745,540
Reasonably Possible	N/A	$ 108,607	$ 108,607	N/A	$ 103,145	$ 103,145
Warranty Contingencies:						
Probable	$ 515	$ 515	$ 515	$ 515	$ 515	$ 515
Reasonably Possible	N/A	$ –	$ –	N/A	$ –	$ –

Note 13. Funds from Dedicated Collections

Funds from dedicated collections are those that are financed by specifically identified revenues and financing sources that remain available over time. They are required by statute to be used for designated activities, benefits, or purposes and must be accounted for separately from the government's general revenues.

The FAA's funds from dedicated collections are reported in the Consolidated Statements of Changes in Net Position and on pages 122–123 among two classifications. The first classification is comprised of the financial statement balances in AATF as of the end of each fiscal year. The second classification of "All other funds from dedicated collections" is comprised of the financial statement balances of all the related funds that receive funding from the AATF and includes Operations-AATF, Grants-in-Aid for Airports, Facilities and Equipment, and Research, Engineering and Development. The "All other funds from dedicated collections" classification also includes the Operations-General Fund, which is primarily funded through transfers from Operations-AATF, but is additionally supplemented by the General Fund of the U.S. Government through annual appropriations. However, since the Operations account is primarily funded from the AATF, it is properly presented as a "fund from dedicated collections." The category of "All other funds from dedicated collections" also includes the Aviation Insurance Revolving Fund and aviation user fees.

Grants-in-Aid for Airports is primarily funded through transfers from the AATF, but also received funding in FY 2020 from the General Fund of the U.S. Government as a result of the Coronavirus Aid, Relief, and Economic Security (CARES) Act, Public Law 116-136. Because the funding from general fund appropriations is expected to be temporary and the predominant source of funding historically comes from the AATF, Grants-in-Aid for Airports is presented as funds from dedicated collections.

This note presents only the funds from dedicated collections that are financing sources available for future expenses, and funds that have been expended but have not yet fully achieved their designated purpose, such as construction in progress. As such, PP&E that has been placed in service, though funded from Facilities and Equipment, are excluded from this note; these funds are no longer available for future expenditure and have been used for their intended purpose.

This note is presented on both a combined and consolidated basis. The combined presentation does not eliminate intra-entity balances or transactions between funds from dedicated collections held by the entity. Similarly, the combined presentation does not eliminate intra-entity balances or transactions with funds from other than dedicated collections, such as the FAA's Franchise Fund. The consolidated presentation eliminates intra-entity balances or transactions between the FAA's funds from dedication collections.

Airport and Airway Trust Fund

The FAA's consolidated financial statements include the results of operations and the financial position of the AATF. The U.S. Congress created the AATF with the passage of the Airport and Airway Revenue Act of 1970.

The Airport and Airway Revenue Act provides a dedicated source of funding for the nation's aviation system through the collection of several aviation-related excise taxes. The IRS collects these taxes on behalf of the FAA's AATF. These taxes can be withdrawn only as appropriated by the U.S. Congress. Twice a month, Treasury allocates the amount collected and subsequently adjusts the allocation to reflect actual collections on a quarterly basis.

As discussed in Note 1D, FY 2021 excise tax revenue includes amounts certified as actual by the IRS for the first three quarters of the year and amounts allocated by the Office of Tax Analysis for the fourth quarter of the year.

All Other Funds from Dedicated Collections

- The Aviation Insurance Program had investments of $2.2 billion and revenues of $14.8 million for the period ended September 30, 2021 compared to $2.3 billion and $42.8 million, respectively, for the period ended September 30, 2020. The Aviation Insurance Program is also discussed in Notes 1G and 12.
- Aviation user fees are charged to commercial airlines that fly in U.S. controlled air space, but neither take off nor land in the U.S. The FAA reported aviation user fees of $43.9 million and $100.7 million for the periods ended September 30, 2021 and 2020, respectively.

The FAA's funds from dedicated collections as of and for the year ended September 30, 2021, consist of the following:

(Dollars in Thousands)	2021				
	AATF	All other funds from dedicated collections	Total funds from dedicated collections (combined)	Eliminations between funds from dedicated collections	Total funds from dedicated collections (consolidated)
BALANCE SHEET					
Assets					
Intragovernmental					
Fund balance with Treasury	$ (1,868,836)	$ 4,286,618	$ 2,417,782	$ –	$ 2,417,782
Investments, net	15,948,941	2,240,715	18,189,656	–	18,189,656
Accounts receivable, net	–	7,999,529	7,999,529	(7,987,058)	12,471
Advances and prepayments	–	208,005	208,005	–	208,005
Total intragovernmental	14,080,105	14,734,867	28,814,972	(7,987,058)	20,827,914
Other than intragovernmental/with the public					
Accounts receivable, net	–	11,543	11,543	–	11,543
General property, plant, and equipment, net	–	3,067,049	3,067,049	–	3,067,049
Advances and prepayments	–	679	679	–	679
Total other than intragovernmental/with the public	–	3,079,271	3,079,271	–	3,079,271
Total assets	$ 14,080,105	$ 17,814,138	$ 31,894,243	$ (7,987,058)	$ 23,907,185
Liabilities					
Intragovernmental liabilities					
Accounts payable	$ 6,965,558	$ 1,031,247	$ 7,996,805	$ (7,987,058)	$ 9,747
Advances from others and deferred revenue	–	26,046	26,046	–	26,046
Other liabilities	–	291,427	291,427	–	291,427
Total intragovernmental liabilities	6,965,558	1,348,720	8,314,278	(7,987,058)	327,220
Other than intragovernmental/with the public					
Accounts payable	–	415,008	415,008	–	415,008
Federal employee benefits payable	–	1,327,835	1,327,835	–	1,327,835
Advances from others and deferred revenue	–	149,298	149,298	–	149,298
Other liabilities					
Accrued grant liabilities	–	2,975,926	2,975,926	–	2,975,926
Other	–	350,338	350,338	–	350,338
Total other than intragovernmental/with the public	–	5,218,405	5,218,405	–	5,218,405
Total liabilities	$ 6,965,558	$ 6,567,125	$ 13,532,683	$ (7,987,058)	$ 5,545,625
Net position					
Unexpended appropriations	$ –	$ 716,250	$ 716,250	$ –	$ 716,250
Cumulative results of operations	7,114,547	10,530,763	17,645,310	–	17,645,310
Total liabilities and net position	$ 14,080,105	$ 17,814,138	$ 31,894,243	$ (7,987,058)	$ 23,907,185
Statement of net cost					
Gross program costs	$ –	$ 18,781,077	$ 18,781,077	$ –	$ 18,781,077
Less earned revenue	(1)	(292,628)	(292,629)	–	(292,629)
Net cost of operations	$ (1)	$ 18,488,449	$ 18,488,448	$ –	$ 18,488,448
Statement of changes in net position					
Unexpended appropriations					
Beginning balances	$ –	$ 432,928	$ 432,928	$ –	$ 432,928
Appropriations received	–	482,500	482,500	–	482,500
Other adjustments	–	(50,235)	(50,235)	–	(50,235)
Appropriations used	–	(148,943)	(148,943)	–	(148,943)
Net change in unexpended appropriations	–	283,322	283,322	–	283,322
Total unexpended appropriations - ending	$ –	$ 716,250	$ 716,250	$ –	$ 716,250
Cumulative results of operations					
Beginning balances	$ 1,842,196	$ 12,352,397	$ 14,194,593	$ –	$ 14,194,593
Appropriations used	–	148,943	148,943	–	148,943
Intragovernmental non-exchange revenue	8,463,962	–	8,463,962	–	8,463,962
Other than intragovernmental non-exchange revenue	–	2,842	2,842	–	2,842
Transfers-in/out without reimbursement	(3,191,612)	16,131,107	12,939,495	–	12,939,495
Imputed financing	–	383,923	383,923	–	383,923
Net cost of operations	(1)	18,488,449	18,488,448	–	18,488,448
Net change in cumulative results of operations	5,272,351	(1,821,634)	3,450,717	–	3,450,717
Cumulative results of operations - ending	$ 7,114,547	$ 10,530,763	$ 17,645,310	$ –	$ 17,645,310
Net position end of period	$ 7,114,547	$ 11,247,013	$ 18,361,560	$ –	$ 18,361,560

The FAA's funds from dedicated collections as of and for the year ended September 30, 2020, consist of the following:

(Dollars in Thousands)	2020				
	AATF	All other funds from dedicated collections	Total funds from dedicated collections (combined)	Eliminations between funds from dedicated collections	Total funds from dedicated collections (consolidated)
BALANCE SHEET					
Assets					
Intragovernmental					
Fund balance with Treasury	$ (124,690)	$ 9,201,036	$ 9,076,346	$ –	$ 9,076,346
Investments, net	7,934,830	2,325,098	10,259,928	–	10,259,928
Accounts receivable, net	–	6,759,191	6,759,191	(6,742,444)	16,747
Advances and prepayments	–	215,568	215,568	–	215,568
Total intragovernmental	7,810,140	18,500,893	26,311,033	(6,742,444)	19,568,589
Other than intragovernmental/with the public					
Accounts receivable, net	–	13,875	13,875	–	13,875
General property, plant, and equipment, net	–	2,779,169	2,779,169	–	2,779,169
Advances and prepayments	–	944	944	–	944
Total other than intragovernmental/with the public	–	2,793,988	2,793,988	–	2,793,988
Total assets	$ 7,810,140	$ 21,294,881	$ 29,105,021	$ (6,742,444)	$ 22,362,577
Liabilities					
Intragovernmental liabilities					
Accounts payable	$ 5,967,944	$ 803,580	$ 6,771,524	$ (6,742,444)	$ 29,080
Advances from others and deferred revenue	–	23,708	23,708	–	23,708
Other liabilities	–	286,485	286,485	–	286,485
Total intragovernmental liabilities	5,967,944	1,113,773	7,081,717	(6,742,444)	339,273
Other than intragovernmental/with the public					
Accounts payable	–	383,738	383,738	–	383,738
Federal employee benefits payable	–	1,343,379	1,343,379	–	1,343,379
Advances from others and deferred revenue	–	188,759	188,759	–	188,759
Other liabilities					
Accrued grant liabilities	–	5,161,060	5,161,060	–	5,161,060
Other	–	318,847	318,847	–	318,847
Total other than intragovernmental/with the public	–	7,395,783	7,395,783	–	7,395,783
Total liabilities	$ 5,967,944	$ 8,509,556	$ 14,477,500	$ (6,742,444)	$ 7,735,056
Net position					
Unexpended appropriations	$ –	$ 432,928	$ 432,928	$ –	$ 432,928
Cumulative results of operations	1,842,196	12,352,397	14,194,593	–	14,194,593
Total liabilities and net position	$ 7,810,140	$ 21,294,881	$ 29,105,021	$ (6,742,444)	$ 22,362,577
Statement of net cost					
Gross program costs	$ –	$ 23,914,854	$ 23,914,854	$ –	$ 23,914,854
Less earned revenue	(14)	(367,959)	(367,973)	–	(367,973)
Net cost of operations	$ (14)	$ 23,546,895	$ 23,546,881	$ –	$ 23,546,881
Statement of changes in net position					
Unexpended appropriations					
Beginning balances	$ –	$ 730,649	$ 730,649	$ –	$ 730,649
Appropriations received	–	111,000	111,000	–	111,000
Other adjustments	–	(73,203)	(73,203)	–	(73,203)
Appropriations used	–	(335,518)	(335,518)	–	(335,518)
Net change in unexpended appropriations	–	(297,721)	(297,721)	–	(297,721)
Total unexpended appropriations - ending	$ –	$ 432,928	$ 432,928	$ –	$ 432,928
Cumulative results of operations					
Beginning balances	$ 9,391,754	$ 9,450,977	$ 18,842,731	$ –	$ 18,842,731
Appropriations used	–	335,518	335,518	–	335,518
Intragovernmental non-exchange revenue	9,345,585	–	9,345,585	–	9,345,585
Other than intragovernmental non-exchange revenue	–	2,526	2,526	–	2,526
Transfers-in/out without reimbursement	(16,895,157)	25,776,168	8,881,011	–	8,881,011
Imputed financing	–	334,103	334,103	–	334,103
Net cost of operations	(14)	23,546,895	23,546,881	–	23,546,881
Net change in cumulative results of operations	(7,549,558)	2,901,420	(4,648,138)	–	(4,648,138)
Cumulative results of operations - ending	$ 1,842,196	$ 12,352,397	$ 14,194,593	$ –	$ 14,194,593
Net position end of period	$ 1,842,196	$ 12,785,325	$ 14,627,521	$ –	$ 14,627,521

Note 14. Net Cost by Program and Strategic Goal

The FAA's five lines of business represent the programs reported in the Consolidated Statements of Net Cost. Cost centers assigned to each line of business permit the direct accumulation of costs. Other costs that are not directly traced to each line of business, such as agency overhead, are allocated. The net cost for non-line of business programs includes services provided by the Mike Monroney Aeronautical Center, aviation overflight user fees, and other programs.

The following is the net cost of operations by strategic goal for the years ended September 30, 2021 and 2020:

(Dollars in Thousands)

	For the Year Ended September 30, 2021				
	Strategic Goals				
	Safety	People	Global Leadership	Operational Excellence	Total
Line of business programs					
Air Traffic Organization	$ 10,496,156	$ 93,338	$ 2,432	$ 1,867,282	$ 12,459,208
Airports	4,627,245	1,703	3	6,597,027	11,225,978
Aviation Safety	1,675,746	21,432	28,590	5,203	1,730,971
Security and Hazardous Materials Safety	121,475	825	706	11,143	134,149
Commercial Space Transportation	25,545	2,745	222	5,674	34,186
Non-line of business programs	(32,738)	27,310	6,786	136,281	137,639
Net cost	$ 16,913,429	$ 147,353	$ 38,739	$ 8,622,610	$ 25,722,131

(Dollars in Thousands)

	For the Year Ended September 30, 2020				
	Strategic Goals				
	Safety	People	Global Leadership	Operational Excellence	Total
Line of business programs					
Air Traffic Organization	$ 10,183,615	$ 88,153	$ 2,033	$ 1,804,840	$ 12,078,641
Airports	5,712,288	1,586	20	5,586,172	11,300,066
Aviation Safety	1,556,228	21,097	28,375	4,640	1,610,340
Security and Hazardous Materials Safety	80,182	908	671	11,765	93,526
Commercial Space Transportation	24,928	1,701	209	1,484	28,322
Non-line of business programs	(103,356)	33,956	5,726	141,996	78,322
Net cost	$ 17,453,885	$ 147,401	$ 37,034	$ 7,550,897	$ 25,189,217

Note 15. Inter-Entity Costs

The FAA receives certain goods and services from other federal entities at no cost or at a cost less than the full cost to the providing federal entity. Consistent with accounting standards, only certain costs of the providing entity that are not fully reimbursed by the FAA are recognized as imputed costs (in the Statement of Net Cost), and are offset by imputed financing sources (in the Statement of Changes in Net Position). Each of these costs are listed below. However, unreimbursed costs of goods and services other than those listed below are not included in our financial statements.

- The Office of Personnel Management (OPM) provides pension and post-retirement benefits to employees upon retirement from federal service. The imputed cost recognized by the FAA is based on the annual Benefits Administration Letter issued by the OPM, which provides actuarial cost factors for accrued pension and post-retirement benefit expenses for current employees. The amount recognized represents the difference between employer and employee contributions and the total cost of the benefit.
- The U.S. Treasury's Judgment Fund provides payments for settlements of lawsuits or court assessments against the FAA.

For the fiscal years ended September 30, 2021 and 2020, imputed costs were as follows:

(Dollars in Thousands)	2021	2020
Office of Personnel Management	$ 390,809	$ 337,429
Treasury Judgment Fund	3,376	6,249
Total imputed costs	$ 394,185	$ 343,678

Note 16. Statement of Budgetary Resources Disclosures

Unobligated Balance from Prior Year Budget Authority, Net

The unobligated balance from prior year budget authority is presented net of transfers, recoveries from prior year obligations, and balances withdrawn for cancelled authority. As a result, the amount will not equal the prior year unobligated balance, end of year total. As of September 30, 2021 and 2020, the unobligated balances from prior year budget authority, net of adjustments were:

(Dollars in Thousands)	2021	2020
Unobligated balance, brought forward from prior year	$ 6,355,669	$ 6,243,915
Adjustments to budgetary resources made during current year		
Transferred to other accounts	(13,950)	–
Adjustments to unobligated balance brought forward	174	(561)
Recoveries of prior year obligations	516,387	331,505
Balances withdrawn to Treasury	(50,235)	(57,667)
Balances withdrawn to the AATF	(32,112)	(23,509)
Unobligated balance from prior year budget authority, net	$ 6,775,933	$ 6,493,683

Appropriations

Appropriations, as reported in the Combined Statements of Budgetary Resources, includes amounts made available to the FAA from general, revolving, and special funds, as well as funds from dedicated collections. In contrast, appropriations received, as reported in the Consolidated Statements of Changes in Net Position, pertain only to amounts made available to the FAA from general funds. The following is a reconciliation of these amounts as of September 30, 2021 and 2020:

(Dollars in Thousands)	2021	2020
Combined Statement of Budgetary Resources - appropriations	$ 41,032,106	$ 34,669,210
Less amounts made available to FAA from AATF dedicated collections	(13,732,000)	(13,756,665)
Less other appropriated receipts and budgetary adjustments	(2,408,606)	(10,401,545)
Consolidated Statement of Changes in Net Position - appropriations received	$ 24,891,500	$ 10,511,000

Available Contract Authority

Contract authority, as reported on the Combined Statement of Budgetary Resources, is the amount permitted by law to enter into contracts or incur obligations. Throughout the fiscal year, the contract authority is liquidated by appropriation. As of September 30, 2021 and 2020, the remaining contract authority available was $2.9 million and $4.2 million, respectively.

Undelivered Orders

As of September 30, 2021 and 2020, the amount of budgetary resources obligated for undelivered orders were:

(Dollars in Thousands)	2021			2020		
	Federal	Non-Federal	Total	Federal	Non-Federal	Total
Obligations, unpaid	$ 184,878	$ 10,629,304	$ 10,814,182	$ 169,702	$ 11,133,901	$ 11,303,603
Obligations, prepaid/advanced	208,677	755	209,432	211,886	1,229	213,115
Total	$ 393,555	$ 10,630,059	$ 11,023,614	$ 381,588	$ 11,135,130	$ 11,516,718

Legal Arrangements Affecting the Use of Unobligated Balances

Unobligated balances remain legally available for obligation when the funds are apportioned by the OMB and the period of availability is unexpired. Unobligated balances are not available when the funds are not yet apportioned or the period of availability is expired. Unobligated balances of expired accounts are not available to fund new obligations, but they can be used for upward adjustments of obligations that were incurred during the period of availability or for paying claims attributable to that time period.

Aviation insurance investments are not available for obligation until authorized, for example, in the event of a major air carrier loss caused by a war risk occurrence.

Distributed Offsetting Receipts

Distributed offsetting receipts are amounts that an agency collects from the public or from other U.S. Government agencies that are used to offset or reduce an agency's budget outlays. Agency outlays are measured on both a gross and net basis, with net outlays being reduced by offsetting receipts (and other amounts).

Statement of Budgetary Resources vs. the Budget of the U.S. Government

The following is a reconciliation of the Combined Statement of Budgetary Resources with the Budget of the U.S. Government:

(Dollars in Millions)

	For the Year Ended September 30, 2020			
	Budgetary Resources	New Obligations and Upward Adjustments	Distributed Offsetting Receipts	Net Outlays
FAA Combined Statement of Budgetary Resources	$ 55,794	$ 49,438	$ (10,410)	$ 30,762
Items included in the Combined Statement of Budgetary Resources, but excluded from the President's budget:				
Expired Funds	(205)	–	–	–
Other	(2)	–	–	1
Budget of the United States Government	$ 55,587	$ 49,438	$ (10,410)	$ 30,763

(For consistency with the presentation of the Budget of the U.S. Government, dollars are presented in millions in this table only.)

The Budget of the U.S. Government is available on the OMB's web site. The budgetary resources, new obligations, upward adjustments, and net outlay amounts are from the "Detailed Budget Estimates by Agency" found in the Appendix of the Budget. The distributed offsetting receipts amount is from the "Federal Budget by Agency and Account" found in the Analytical Perspectives of the Budget. The actual amounts for FY 2020 are presented in the FY 2022 Budget. The actual amounts for FY 2021 will be presented in the FY 2023 Budget, which occurs after the issuance of these financial statements. The OMB is expected to publish this information early in calendar year 2022.

The primary difference between the Combined Statement of Budgetary Resources and the Budget of the U.S. Government is that budgetary resources available from funds with expired authority are not included in the Budget of the U.S. Government. Other differences are due to rounding.

Note 17. Incidental Custodial Collections

Cash collections that are "custodial" are not revenue to the FAA, but are collected on behalf of other federal entities or funds. Custodial collections are considered to be incidental to the FAA's primary mission. The following table presents custodial collections and the disposition of those collections for the years ended September 30, 2021 and 2020:

(Dollars in Thousands)	2021	2020
Custodial revenue		
Sources of cash collections:		
Fines, penalties, and forfeitures	$ 30,770	$ 3,286
Unclaimed money and property	46	–
General fund proprietary interest	12	10
Miscellaneous recoveries and refunds	9,400	7,128
Total cash collections	40,228	10,424
Accrual adjustment	2,684	(3,203)
Total custodial revenue	42,912	7,221
Disposition of collections		
Transferred to others (by recipient):		
Treasury (general fund)	40,228	10,424
Amounts yet to be transferred	2,684	(3,203)
Total disposition of collections	42,912	7,221
Net custodial activity	$ –	$ –

Note 18. Reconciliation of Net Cost to Net Outlays

Budgetary and financial accounting information differ. Budgetary accounting is used for planning and control purposes and relates to both the receipt and use of cash, as well as reporting the federal deficit. Financial accounting is intended to provide a picture of the government's financial operations and financial position so it presents information on an accrual basis. The accrual basis includes information about costs arising from the consumption of assets and the incurrence of liabilities.

The reconciliation of net outlays, presented on a budgetary basis, and the net cost, presented on an accrual basis, provides an explanation of the relationship between budgetary and financial accounting information. The reconciliation serves not only to identify costs paid for in the past and those that will be paid in the future, but also to assure integrity between budgetary and financial accounting.

The analysis below illustrates this reconciliation by listing the key differences between net cost and net outlays.

- The acquisition of capital assets results in outlays, but does not result in costs. Rather, the costs are recognized over the useful lives of the assets as depreciation expense. To reconcile this difference, depreciation is a component of net operating cost, but not part of net outlays; and the acquisition of capital assets is a component of net outlays, but not part of net operating cost.
- Special fund receipts, such as aviation overflight user fees, are collected from specific sources that are earmarked by law for a specific purpose, and require an appropriation to be expended. The exchange revenue from these receipts is included in the net cost of operations, but there is no corresponding net outlay.

Although some differences presented in the reconciliation relate to amounts reported in the balance sheet and statement of net position, amounts may not agree. Certain financial activities do not result in net operating cost, nor net outlays, and are therefore excluded from the reconciliation. For example, the purchase of investments results in a change in assets on the balance sheet, but does not result in net operating cost nor net outlays.

The following is a reconciliation of net cost to net outlays as of September 30, 2021:

(Dollars in Thousands)	2021		
	Intragovernmental	Other than intragovernmental/ with the public	Total
Net Operating Cost	$ 2,744,521	$ 22,977,610	$ 25,722,131
Components of Net Operating Cost Not Part of Net Outlays			
Property, plant, and equipment depreciation expense	–	(1,313,052)	(1,313,052)
Property, plant, and equipment disposals and revaluations	–	(157,918)	(157,918)
Cost of goods sold	159	(67,126)	(66,967)
Inventory and related property disposals and revaluations	–	13,216	13,216
Increase/(decrease) in assets:			
Accounts receivable, net	(4,377)	(2,132)	(6,509)
Investments, net	(4,272)	–	(4,272)
Advances and prepayments	5,153	(264)	4,889
Other assets	–	(27)	(27)
(Increase)/decrease in liabilities:			
Accounts payable	19,642	(31,195)	(11,553)
Federal employee benefits payable	–	15,513	15,513
Environmental and disposal liabilities	–	(6,608)	(6,608)
Advances from others and deferred revenue	310	39,147	39,457
Other liabilities			
Accrued grant liabilities	–	(2,069,384)	(2,069,384)
Other	(4,050)	(30,810)	(34,860)
Financing sources:			
Imputed cost	(394,185)	–	(394,185)
Total Components of Net Operating Cost Not Part of Net Outlays	(381,620)	(3,610,640)	(3,992,260)
Components of Net Outlays Not Part of Net Operating Cost			
Acquisition of capital assets	50,263	1,132,146	1,182,409
Acquisition of inventory and related property	24,307	28,940	53,247
Financing sources:			
Transfers-in/out without reimbursement	13,758	–	13,758
Total Components of Net Outlays Not Part of Net Operating Cost	88,328	1,161,086	1,249,414
Miscellaneous Items			
Special fund receipts	36,050	–	36,050
Deposit funds and miscellaneous receipts	–	(9,435)	(9,435)
Other	1,888	(4,729)	(2,841)
Total Miscellaneous Items	37,938	(14,164)	23,774
Net Outlays	$ 2,489,167	$ 20,513,892	$ 23,003,059
Related Amounts on the Statement of Budgetary Resources			
Outlays, net (total)			39,421,662
Distributed offsetting receipts			(16,418,603)
Agency outlays, net			$ 23,003,059

The following is a reconciliation of net cost to net outlays as of September 30, 2020:

(Dollars in Thousands)	2020		
	Intragovernmental	Other than intragovernmental/ with the public	Total
Net Operating Cost	$ 2,554,374	$ 22,634,843	$ 25,189,217
Components of Net Operating Cost Not Part of Net Outlays			
Property, plant, and equipment depreciation expense	–	(1,336,609)	(1,336,609)
Property, plant, and equipment disposals and revaluations	–	(138,701)	(138,701)
Cost of goods sold	(1,021)	(60,363)	(61,384)
Inventory and related property disposals and revaluations	–	39,778	39,778
Increase/(decrease) in assets:			
Accounts receivable, net	(11,703)	(16,383)	(28,086)
Investments, net	9,567	–	9,567
Advances and prepayments	(6,288)	520	(5,768)
Other assets	–	–	–
(Increase)/decrease in liabilities:			
Accounts payable	2,151	30,752	32,903
Federal employee benefits payable	–	(58,480)	(58,480)
Environmental and disposal liabilities	–	121,452	121,452
Advances from others and deferred revenue	(1,650)	(17,031)	(18,681)
Other liabilities			
Accrued grant liabilities	–	(4,417,792)	(4,417,792)
Other	(23,030)	(88,532)	(111,562)
Financing sources:			
Imputed cost	(343,678)	–	(343,678)
Total Components of Net Operating Cost Not Part of Net Outlays	(375,652)	(5,941,389)	(6,317,041)
Components of Net Outlays Not Part of Net Operating Cost			
Acquisition of capital assets	47,197	1,256,832	1,304,029
Acquisition of inventory and related property	–	67,007	67,007
Financing sources:			
Transfers-in/out without reimbursement	8,807	–	8,807
Total Components of Net Outlays Not Part of Net Operating Cost	56,004	1,323,839	1,379,843
Miscellaneous Items			
Special fund receipts	109,473	–	109,473
Deposit funds and miscellaneous receipts	–	(6)	(6)
Other	(6,826)	(2,922)	(9,748)
Total Miscellaneous Items	102,647	(2,928)	99,719
Net Outlays	$ 2,337,373	$ 18,014,365	$ 20,351,738
Related Amounts on the Statement of Budgetary Resources			
Outlays, net (total)			30,761,594
Distributed offsetting receipts			(10,409,856)
Agency outlays, net			$ 20,351,738

Note 19. Disclosure Entities

The Center for Advanced Aviation System Development (CAASD) is a Federally Funded Research and Development Center (FFRDC) sponsored by the FAA. FFRDCs are nonprofit entities that are sponsored and funded by the U.S. Government to meet special long-term research or development needs. CAASD serves the public interest by providing essential research to advance the safety, security, effectiveness, and efficiency of aviation and transportation in the United States and around the world.

The administrator of CAASD is The MITRE Corporation (MITRE). MITRE is a not-for-profit organization that operates multiple FFRDCs including CAASD. MITRE is a "public interest company" having no commercial interests. The absence of commercial conflicts of interest is essential to maintaining independence and objectivity.

As the sponsor of CAASD, the FAA has a long-term relationship with MITRE. The nature of this relationship is for the FAA to provide sufficient physical and financial resources in support of CAASD's innovative research and development that in turn supports the accomplishment of FAA's mission. The FAA's relationship with MITRE and CAASD presents no financial or non-financial risk, and there is no expectation of benefits based on this relationship, other than the results of the independent research and development.

For the periods ended September 30, 2021 and 2020, the FAA had new obligations of $173 million and $144 million, respectively, in support of its sponsorship agreement with MITRE for CAASD.

Note 20. COVID-19 Activity

The Coronavirus Aid, Relief, and Economic Security (CARES) Act, Public Law 116-136, provided $10 billion in general fund appropriations for Grants-in-Aid for Airports to prevent, prepare for, and respond to the COVID-19 pandemic. In addition, of the amounts previously made available from the AATF for operations in the Bipartisan Budget Act of 2018 (Public Law 115–123), up to $25 million may be repurposed to prevent, prepare for, and respond to the COVID-19 pandemic. Airport grants issued with CARES Act funds can be used for airport capital expenditures and airport operating expenses such as payroll, utilities, and debt services.

The Coronavirus Response and Relief Supplemental Appropriations Act, 2021 (CRRSA), Public Law 116-260, provided an additional $2 billion in general fund appropriations for Grants-in-Aid for Airports to prevent, prepare for, and respond to coronavirus. Airport grants issued with CRRSA Act funds can be used for operational costs and debt service but not for capital expenditures.

The American Rescue Plan Act of 2021 (ARPA), Public Law 117-2, provided an additional $8 billion in general fund appropriations under Relief for Airports, a new program account, to be allocated to sponsors of airports to prevent, prepare for, and respond to coronavirus. Airport grants issued with ARPA funds can be used for operating expenses, debt service payments, the federal share of airport development projects, and airport concessions. In addition, the act established an emergency FAA employee leave fund and appropriated $9 million from the general fund for the use of paid leave by any FAA employee who is unable to work due to circumstances related to COVID-19.

Because Grants-in-Aid for Airports is a trust fund program account, budgetary concepts require that general fund appropriations (i.e., $10 billion from the CARES Act and $2 billion from the CRRSA Act) be deposited to a general fund payment account, apportioned, then transferred to an available trust fund receipt account, fully expending the appropriation. The transfer-in to the available trust fund receipt account is then recorded as an appropriated receipt, apportioned, and available for obligation.

Because Relief for Airports was established as a general fund program account, the general fund appropriation is deposited, apportioned, and expended out of the same budgetary program account.

The classification of funds from dedicated collections is made by individual fund. In situations where there is a mixed source of funding, the classification is based on the predominant source of funding.

This note is presented on a combined basis. The combined presentation does not eliminate intra-entity balances or transactions.

The FAA's COVID-19 activity as of and for the year ended September 30, 2021, consist of the following:

(Dollars in Thousands)	2021 Funds from dedicated collections	2021 Funds from other than dedicated collections	2021 Consolidated total
BALANCE SHEET			
Assets			
Fund balance with Treasury (Note 2)	$ 2,550,749	$ 9,094,602	$ 11,645,351
Accounts receivable, net (Note 4)	82	–	82
Advances and prepayments	2,030	–	2,030
Total assets	$ 2,552,861	$ 9,094,602	$ 11,647,463
Liabilities and net position			
Accounts payable	$ (59)	$ 245	$ 186
Federal employee benefits payable	52	–	52
Other liabilities			
Accrued grant liabilities	2,184,474	4,254,518	6,438,992
Other (Note 10)	31	–	31
Unexpended appropriations	–	4,838,873	4,838,873
Cumulative results of operations	368,363	966	369,329
Total liabilities and net position	$ 2,552,861	$ 9,094,602	$ 11,647,463
STATEMENT OF NET COST			
Gross program costs	$ 2,135,346	$ 5,165,161	$ 7,300,507
Total net cost	$ 2,135,346	$ 5,165,161	$ 7,300,507
STATEMENT OF CHANGES IN NET POSITION			
Unexpended appropriations			
Appropriations received (Note 16)	$ –	$ 10,009,000	$ 10,009,000
Appropriations used	–	(5,170,127)	(5,170,127)
Total unexpended appropriations	$ –	$ 4,838,873	$ 4,838,873
Cumulative results of operations			
Beginning balances	$ 2,503,690	$ –	$ 2,503,690
Appropriations used	–	5,170,127	5,170,127
Transfers-in/out without reimbursement	(1)	(4,000)	(4,001)
Imputed financing (Note 15)	20	–	20
Net cost of operations	2,135,346	5,165,161	7,300,507
Net change in cumulative results of operations	(2,135,327)	966	(2,134,361)
Cumulative results of operations	$ 368,363	$ 966	$ 369,329
Total net position	$ 368,363	$ 4,839,839	$ 5,208,202
COMBINED STATEMENTS OF BUDGETARY RESOURCES			
Budgetary resources (Note 16)			
Unobligated balance from prior year budget authority, net	$ 725,172	$ –	$ 725,172
Appropriations	–	12,009,000	12,009,000
Total budgetary resources	$ 725,172	$ 12,009,000	$ 12,734,172
Status of budgetary resources			
New obligations and upward adjustments	$ 513,099	$ 8,340,531	$ 8,853,630
Unobligated balance, end of year	212,073	3,668,469	3,880,542
Total budgetary resources	$ 725,172	$ 12,009,000	$ 12,734,172
Outlays, net			
Outlays, net (total)	$ 4,318,204	$ 2,914,398	$ 7,232,602
Distributed offsetting receipts	–	(2,000,000)	(2,000,000)
Agency outlays, net	$ 4,318,204	$ 914,398	$ 5,232,602

The FAA's COVID-19 activity as of and for the year ended September 30, 2020, consist of the following:

(Dollars in Thousands)	2020 Funds from dedicated collections	2020 Funds from other than dedicated collections	2020 Consolidated total
BALANCE SHEET			
Assets			
Fund balance with Treasury (Note 2)	$ 6,868,828	$ –	$ 6,868,828
Accounts receivable, net (Note 4)	1,500	–	1,500
Advances and prepayments	2,699	–	2,699
Total assets	$ 6,873,027	$ –	$ 6,873,027
Liabilities and net position			
Accounts payable	$ 141	$ –	$ 141
Federal employee benefits payable	47	–	47
Other liabilities			
Accrued grant liabilities	4,369,120	–	4,369,120
Other (Note 10)	29	–	29
Unexpended appropriations	–	–	–
Cumulative results of operations	2,503,690	–	2,503,690
Total liabilities and net position	$ 6,873,027	$ –	$ 6,873,027
STATEMENT OF NET COST			
Gross program costs	$ 7,520,994	$ –	$ 7,520,994
Total net cost	$ 7,520,994	$ –	$ 7,520,994
STATEMENT OF CHANGES IN NET POSITION			
Unexpended appropriations			
Appropriations received (Note 16)	$ –	$ 10,000,000	$ 10,000,000
Appropriations used	–	(10,000,000)	(10,000,000)
Total unexpended appropriations	$ –	$ –	$ –
Cumulative results of operations			
Beginning balances	$ 25,000	$ –	$ 25,000
Appropriations used	–	10,000,000	10,000,000
Transfers-in/out without reimbursement	9,999,674	(10,000,000)	(326)
Imputed financing (Note 15)	10	–	10
Net cost of operations	7,520,994	–	7,520,994
Net change in cumulative results of operations	2,478,690	–	2,478,690
Cumulative results of operations	$ 2,503,690	$ –	$ 2,503,690
Total net position	$ 2,503,690	$ –	$ 2,503,690
COMBINED STATEMENTS OF BUDGETARY RESOURCES			
Budgetary resources (Note 16)			
Unobligated balance from prior year budget authority, net	$ 25,000	$ –	$ 25,000
Appropriations	10,000,000	10,000,000	20,000,000
Total budgetary resources	$ 10,025,000	$ 10,000,000	$ 20,025,000
Status of budgetary resources			
New obligations and upward adjustments	$ 9,383,133	$ 10,000,000	$ 19,383,133
Unobligated balance, end of year	641,867	–	641,867
Total budgetary resources	$ 10,025,000	$ 10,000,000	$ 20,025,000
Outlays, net			
Outlays, net (total)	$ 3,131,172	$ 10,000,000	$ 13,131,172
Distributed offsetting receipts	(10,000,000)	–	(10,000,000)
Agency outlays, net	$ (6,868,828)	$ 10,000,000	$ 3,131,172

Required Supplementary Information

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

DEFERRED MAINTENANCE AND REPAIRS

As of September 30, 2021
(Dollars in Thousands)
Unaudited

			Cost to return to acceptable condition	
Category	Description	Facility condition is <	Beginning balance	Ending balance
Staffed Facilities				
Tier 1	ARTCCs, ATCT/TRACONs at major airports	95%	$ 270,481	$ 473,526
Tier 2	WJHTC and MMAC	95%	62,645	67,250
Tier 3	ATCT/TRACONs at all non-major airports	90%	30,981	76,663
Unstaffed Facilities				
Tier 1	Long range radars	95%	70,891	81,801
Other	Unstaffed infrastructure and fuel storage tanks	N/A	1,006,970	1,025,714
	Total		$ 1,441,968	$ 1,724,954

Deferred maintenance and repair is maintenance or repair that was not performed when it should have been, or was scheduled to be performed but was delayed until a future period due to a lack of resources or funding.

The FAA reports deferred maintenance for facilities critical to the operation of our nation's airspace with a Facilities Condition Index score less than 90-95 percent—meaning that they must be maintained at 90-95 percent of prescribed levels or better to be considered in fair condition or better. These facilities include Air Route Traffic Control Centers (ARTCCs), Air Traffic Control Towers (ATCTs), Terminal Radar Approach Control (TRACON) facilities, the William J. Hughes Technical Center (WJHTC), the Mike Monroney Aeronautical Center (MMAC), and long range radar facilities. Deferred maintenance for fuel storage tanks, and unstaffed infrastructure facilities are reported if they have exceeded the expected lifecycle for those assets. The Facilities Condition Index score is not considered for those assets. All of these facilities are capitalized general property, plant, and equipment, and most of these facilities are fully depreciated given that they were constructed more than 50 years ago.

The FAA prioritizes the maintenance of facilities by their operational significance within the national airspace system. Tier 1 and Tier 2 facilities are those staffed with FAA employees and contractors that support the busiest airports in the United States. Maintenance and repair activities are prioritized to elevate and sustain the greatest number of Tier 1 and Tier 2 facilities to fair to good condition within available funding appropriated to FAA. Ancillary facilities such as long range radars, unstaffed infrastructure, and fuel storage tanks that support Tier 1 and Tier 2 facilities are given higher priority than those that support Tier 3 facilities. Tier 3 facilities support airports with low operational air traffic volume.

Staffed facilities are assessed for deferred maintenance and lifecycle costs on a rotating basis by a qualified engineering firm. Deferred maintenance for unstaffed facilities is determined based on facility surveys or estimated based on the age of the structure. FAA facilities that are administrative in nature have been excluded from these estimates since the state of those facilities does not have a direct impact on the control of air traffic operations. Personal property housed within air traffic facilities, both staffed and unstaffed, has also been excluded from these estimates because it is likely to become obsolete as technology continues to advance. The FAA recognizes maintenance and repair expenses as incurred.

The increase in Tier 1 staffed facilities is due to the net addition of eighteen ATCT and TRACON facilities whose facility condition scores fell below the acceptable range. The increase in Tier 3 staffed facilities is because of an increase of seventeen facilities that fell below the acceptable condition level. The increase in deferred maintenance for Long Range Radars relates to the offsetting decreases and increases of parts of the facilities that have aged into the deferred maintenance

backlog. For 2021 there were three facilities that increased by nearly $1 million over the previous year and two facilities that increased by approximately $2 million over the previous year. The increase in unstaffed infrastructure and fuel storage tanks is attributed to improved cataloguing of all assets on unstaffed infrastructure sites which identified 7,695 new assets that were added to the inventory this year.

Schedule of Budgetary Resources by Major Fund Type

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

SCHEDULE OF BUDGETARY RESOURCES BY MAJOR FUND TYPE

For the year ended September 30, 2021

(Dollars in Thousands)
Unaudited

	Grants-in-Aid for Airports	Relief for Airports	Facilities & Equipment	Research, Eng. & Development	Aviation Insurance Revolving	Franchise Fund	Operations	Expenditure Transfers between FAA Accounts	Other Funds	Combined Total
BUDGETARY RESOURCES										
Unobligated balance from prior year budget authority, net	$ 1,347,545	$ –	$ 2,343,575	$ 179,432	$ 2,300,692	$ 264,600	$ 332,950	$ –	$ 7,139	$ 6,775,933
Appropriations	2,400,000	8,000,000	3,015,000	198,000	–	–	482,500	26,919,000	17,606	41,032,106
Contract authority	3,350,000	–	–	–	–	–	–	–	–	3,350,000
Spending authority from offsetting collections	38	–	59,872	8,165	18,943	470,389	10,665,212	–	–	11,222,619
Total budgetary resources	$ 7,097,583	$ 8,000,000	$ 5,418,447	$ 385,597	$ 2,319,635	$ 734,989	$ 11,480,662	$ 26,919,000	$ 24,745	$ 62,380,658
STATUS OF BUDGETARY RESOURCES										
New obligations and upward adjustments	$ 6,388,557	$ 4,340,869	$ 3,125,054	$ 230,330	$ 3,640	$ 520,755	$ 11,280,539	$ 26,919,000	$ 1,757	$ 52,810,501
Unobligated balance, end of year										
Apportioned, unexpired accounts	687,255	3,659,131	2,211,709	149,812	17,680	214,150	160,289	–	14,382	7,114,408
Unapportioned, unexpired accounts	19,462	–	443	–	2,298,315	84	3,046	–	8,606	2,329,956
Unexpired unobligated balance, end of year	706,717	3,659,131	2,212,152	149,812	2,315,995	214,234	163,335	–	22,988	9,444,364
Expired unobligated balance, end of year	2,309	–	81,241	5,455	–	–	36,788	–	–	125,793
Unobligated balance, end of year (total)	709,026	3,659,131	2,293,393	155,267	2,315,995	214,234	200,123	–	22,988	9,570,157
Total budgetary resources	$ 7,097,583	$ 8,000,000	$ 5,418,447	$ 385,597	$ 2,319,635	$ 734,989	$ 11,480,662	$ 26,919,000	$ 24,745	$ 62,380,658
OUTLAYS, NET										
Outlays, net (total)	$ 8,835,285	$ 332,979	$ 2,761,309	$ 159,041	$ (15,613)	$ 1,015	$ 673,385	$ 26,672,000	$ 2,261	$ 39,421,662
Distributed offsetting receipts	–	–	–	–	–	–	–	(16,400,000)	(18,603)	(16,418,603)
Agency outlays, net	$ 8,835,285	$ 332,979	$ 2,761,309	$ 159,041	$ (15,613)	$ 1,015	$ 673,385	$ 10,272,000	$ (16,342)	$ 23,003,059

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

SCHEDULE OF BUDGETARY RESOURCES BY MAJOR FUND TYPE

For the year ended September 30, 2020

(Dollars in Thousands)

Unaudited

	Grants-in-Aid for Airports	Relief for Airports	Facilities & Equipment	Research, Eng. & Development	Aviation Insurance Revolving	Franchise Fund	Operations	Expenditure Transfers between FAA Accounts	Other Funds	Combined Total
BUDGETARY RESOURCES										
Unobligated balance from prior year budget authority, net	$ 1,179,964	$ –	$ 2,188,970	$ 173,520	$ 2,271,141	$ 273,117	$ 386,129	$ –	$ 20,842	$ 6,493,683
Appropriations	10,400,000	–	3,045,000	192,669	–	–	111,000	20,919,000	1,541	34,669,210
Contract authority	3,350,000	–	–	–	–	–	–	–	–	3,350,000
Spending authority from offsetting collections	125	–	80,766	21,006	32,129	490,271	10,656,418	–	–	11,280,715
Total budgetary resources	$ 14,930,089	$ –	$ 5,314,736	$ 387,195	$ 2,303,270	$ 763,388	$ 11,153,547	$ 20,919,000	$ 22,383	$ 55,793,608
STATUS OF BUDGETARY RESOURCES										
New obligations and upward adjustments	$ 13,804,795	$ –	$ 3,073,189	$ 209,768	$ 2,780	$ 533,307	$ 10,893,805	$ 20,919,000	$ 1,295	$ 49,437,939
Unobligated balance, end of year										
Apportioned, unexpired accounts	1,106,717	–	2,158,167	172,473	18,622	230,081	176,738	–	19,547	3,882,345
Unapportioned, unexpired accounts	18,577	–	1,095	–	2,281,868	–	211	–	1,541	2,303,292
Unexpired unobligated balance, end of year	1,125,294	–	2,159,262	172,473	2,300,490	230,081	176,949	–	21,088	6,185,637
Expired unobligated balance, end of year	–	–	82,285	4,954	–	–	82,793	–	–	170,032
Unobligated balance, end of year (total)	1,125,294	–	2,241,547	177,427	2,300,490	230,081	259,742	–	21,088	6,355,669
Total budgetary resources	$ 14,930,089	$ –	$ 5,314,736	$ 387,195	$ 2,303,270	$ 763,388	$ 11,153,547	$ 20,919,000	$ 22,383	$ 55,793,608
OUTLAYS, NET										
Outlays, net (total)	$ 6,896,534	$ –	$ 2,807,921	$ 153,018	$ (29,788)	$ 7,375	$ 161,828	$ 20,762,900	$ 1,806	$ 30,761,594
Distributed offsetting receipts	–	–	–	–	–	–	–	(10,400,000)	(9,856)	(10,409,856)
Agency outlays, net	$ 6,896,534	$ –	$ 2,807,921	$ 153,018	$ (29,788)	$ 7,375	$ 161,828	$ 10,362,900	$ (8,050)	$ 20,351,738

OTHER INFORMATION

Mechanic using a tablet to record data during the pandemic. Photo by franckreporter/iStock Images.

Summary of Financial Statement Audit and Management Assurances

Financial Statement Audit Summary

Table 1 is a summary of the results of the independent audit of the FAA's consolidated financial statements by the agency's auditors in connection with the FY 2021 audit.

Table 1: **Summary of Financial Statement Audit**

Audit Opinion	Unmodified				
Restatement	No				
Material Weaknesses	**Beginning Balance**	**New**	**Resolved**	**Consolidated**	**Ending Balance**
Total Material Weaknesses	0	0	0	0	0

Management Assurances Summary

Table 2 is a summary of management assurances for FY 2021 related to the effectiveness of internal control over the FAA's financial reporting and operations, and its conformance with financial management system requirements under Sections 2 and 4, respectively, of the *Federal Managers' Financial Integrity Act of 1982* (FMFIA). The last portion of Table 2 summarizes the FAA's compliance with the *Federal Financial Management Improvement Act of 1996* (FFMIA).

Table 2: **Summary of Management Assurances**

Effectiveness of Internal Control over Financial Reporting (FMFIA § 2)

Statement of Assurance	**Unmodified**					
Material Weaknesses	**Beginning Balance**	**New**	**Resolved**	**Consolidated**	**Reassessed**	**Ending Balance**
Total Material Weaknesses	0	0	0	0	0	0

Effectiveness of Internal Control over Operations (FMFIA § 2)

Statement of Assurance	**Unmodified**					
Material Weaknesses	**Beginning Balance**	**New**	**Resolved**	**Consolidated**	**Reassessed**	**Ending Balance**
Total Material Weaknesses	0	0	0	0	0	0

Conformance with Federal Financial Management System Requirements (FMFIA § 4)

Statement of Assurance	**Federal Systems conform to financial management system requirements**					
Non-Conformances	**Beginning Balance**	**New**	**Resolved**	**Consolidated**	**Reassessed**	**Ending Balance**
Total non-conformances	0	0	0	0	0	0

Compliance with Section 803(a) of the Federal Financial Management Improvement Act (FFMIA)

	Agency	**Auditor**
1. Federal Financial Management System Requirements	No lack of compliance noted	No lack of compliance noted
2. Applicable Federal Accounting Standards	No lack of compliance noted	No lack of compliance noted
3. U.S. Standard General Ledger at Transaction Level	No lack of compliance noted	No lack of compliance noted

Payment Integrity

The Payment Integrity Information Act of 2019 (PIIA) requires agencies to identify programs and activities susceptible to significant improper payments. The purpose of the PIIA is to improve efforts to identify and reduce government-wide improper payments.

Office of Management and Budget (OMB) Circular A-123, Appendix C, *Requirements for Payment Integrity Improvement* (M-21-19), dated March 5, 2021, provides guidance on the implementation of PIIA. OMB Circular A-123, Appendix C defines an improper payment as any payment that should not have been made or that was made in an incorrect amount under statutory, contractual, administrative, or other legally applicable requirements. Incorrect amounts are overpayments or underpayments that are made to eligible recipients including inappropriate denials of payment or service, any payment that does not account for credit for applicable discounts, payments for the incorrect amount, and duplicate payments. An improper payment also includes any payment that was made to an ineligible recipient or for an ineligible good or service, or payments for goods or services not received (except for such payments authorized by law).

In addition, when an agency's review is unable to discern whether a payment was proper because of insufficient or lack of documentation, this payment must also be considered an improper payment.

On March 19, 2021, OMB issued a memorandum, *Promoting Public Trust in the Federal Government through Effective Implementation of the American Rescue Plan Act and Stewardship of the Taxpayer Resources* (M-21-20), that requires agencies to work with the Pandemic Response Accountability Committee (PRAC) and agencies' inspectors general to strengthen payment integrity. The goal of collaborating is to minimize the risk of waste, fraud, and abuse and improve the overall award and administration of financial assistance programs with an increased focus on human-centered programs and services designed to achieve more equitable results.

On March 30, 2018, OMB issued a memorandum, *Implementation of Internal Controls and Grant Expenditures for the Disaster-Related Appropriations* (M-18-14), that requires agencies to manage disaster relief funds with the same discipline and rigor as programs that are traditionally designated as susceptible to significant improper payments under PIIA. For more detailed information on payment integrity efforts, see the Department of Transportation reporting at: ***https://www.paymentaccuracy.gov/.***

Federal Aviation Administration Process

The FAA's process for complying with PIIA and OMB Circular A-123, Appendix C, consists of the following steps:

1) Review programs and activities to identify those susceptible to significant improper payments.
2) Obtain a statistically valid estimate of the annual amount of improper payments in programs and activities for those programs identified as susceptible to significant improper payments.
3) Implement a plan to reduce erroneous payments.
4) Report estimates of the annual amounts of improper payments in programs and activities, and progress in reducing occurrence of future improper payments.

For FY 2021 reporting, the FAA conducted detailed improper payment testing for the Disaster Relief Program repurposed for COVID-19 use. In addition, the agency completed a quantitative risk assessment for the CARES Act Grants-in-Aid for Airports Program. The results of this quantitative assessment did not exceed the statutory thresholds and is not considered susceptible to significant improper payments.

Actions Taken to Address Auditor Recovery Recommendations

The DOT performed a department-wide payment recapture audit, which included the FAA's programs and activities, and worked with the FAA's Enterprise Services Center to initiate recovery of any FAA overpayments and identify payment process weaknesses. External auditors do not perform this work and we do not have corrective actions to address.

Since the overpayments identified in FY 2021 were immaterial amounts, DOT determined that it was not cost-effective to report them by each individual DOT agency (i.e., FAA). Instead, DOT will report results at the department level in the DOT's FY 2021 Agency Financial Report, which will be published by November 15, 2021.

Civil Monetary Penalty Inflation Adjustments

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Unaudited

The Federal Civil Penalties Inflation Adjustment Act of 2015, Public Law 114-74, requires agencies to make regular and consistent inflationary adjustments of civil monetary penalties to maintain their deterrent effect. Following are the civil penalties that the FAA may impose, the authority for imposing the penalty, the dates of inflation adjustments, and the current penalty level.

Statutory Authority	Penalty	Year of Enactment	Latest year of adjustment (via statute or regulation)	Current Maximum Penalty or Penalty Range	Location for Penalty Update Details
49 U.S.C. 5123(a), subparagraph (1)	Violation of hazardous materials transportation law	1975	2021	$84,425	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 5123(a), subparagraph (2)	Violation of hazardous materials transportation law resulting in death, serious illness, severe injury, or substantial property destruction	2005	2021	$196,992	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 5123(a), subparagraph (3)	Violation of hazardous materials transportation law relating to training	2005	2021	$508–$84,425	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 44704(d)(3)	Knowing presentation of a nonconforming aircraft for issuance of an initial airworthiness certificate	2020	N/A	$1,000,000	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 44704(e)(4)	Knowing failure to submit safety critical information or include certain such information in an airplane flight manual or flight crew operating manual	2020	N/A	$1,000,000	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 44802 note	Operation of an unmanned aircraft or unmanned aircraft system equipped or armed with a dangerous weapon	2018	2021	$25,742	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301(a)(1)	Violation by a person other than an individual or small business concern under 49 U.S.C. 46301(a)(1)(A) or (B)	1958	2021	$35,188	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301(a)(1)	Violation by an airman serving as an airman under 49 U.S.C. 46301(a)(1)(A) or (B) (but not covered by 46301(a)(5)(A) or (B))	1958	2021	$1,548	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301(a)(1)	Violation by an individual or small business concern under 49 U.S.C. 46301(a)(1)(A) or (B) (but not covered in 49 U.S.C. 46301(a)(5))	1958	2021	$1,548	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301(a)(3)	Violation of 49 U.S.C. 47107(b) (or any assurance made under such section) or 49 U.S.C. 47133	1958	N/A	Increase above otherwise applicable maximum amount not to exceed 3 times the amount of revenues that are used in violation of such section.	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301(a)(5)(A)	Violation by an individual or small business concern (except an airman serving as an airman) under 49 U.S.C. 46301(a)(5)(A)(i) or (ii)	2003	2021	$14,074	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)

Continued on next page.

Statutory Authority	Penalty	Year of Enactment	Latest year of adjustment (via statute or regulation)	Current Maximum Penalty or Penalty Range	Location for Penalty Update Details
49 U.S.C. 46301(a)(5)(B)(i)	Violation by an individual or small business concern related to the transportation of hazardous materials	2003	2021	$14,074	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301(a)(5)(B)(ii)	Violation by an individual or small business concern related to the registration or recordation under 49 U.S.C. chapter 441, of an aircraft not used to provide air transportation	2003	2021	$14,074	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301(a)(5)(B)(iii)	Violation by an individual or small business concern of 49 U.S.C. 44718(d), relating to limitation on construction or establishment of landfills	2003	2021	$14,074	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301(a)(5)(B)(iv)	Violation by an individual or small business concern of 49 U.S.C. 44725, relating to the safe disposal of life-limited aircraft parts	2003	2021	$14,074	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301 note	Individual who aims the beam of a laser pointer at an aircraft in the airspace jurisdiction of the United States, or at the flight path of such an aircraft	2016	2021	$26,929	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46301(b)	Tampering with a smoke alarm device	1987	2021	$4,518	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46302	Knowingly providing false information about alleged violation involving the special aircraft jurisdiction of the United States	1984	2021	$24,539	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46318	Interference with cabin or flight crew	2000	2021	$36,948	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46319	Permanent closure of an airport without providing sufficient notice	2003	2021	$14,074	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 46320	Operating an unmanned aircraft and in so doing knowingly or recklessly interfering with a wildfire suppression, law enforcement, or emergency response effort	2016	2021	$21,544	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
49 U.S.C. 47531	Violation of 49 U.S.C. 47528-47530, relating to the prohibition of operating certain aircraft not complying with stage 3 noise levels	1990	N/A	See 49 U.S.C. 46301(a)(1)(A) and (a)(5)(A), above	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)
51 U.S.C. 50917	Violation of a requirement of the Commercial Space Launch Act, as amended, a regulation issued under the Act, or any term or condition of a license or permit issued or transferred under the Act	1984	2021	$247,280	Federal Register; 86 Fed. Reg. 23,241 (May 3, 2021)

Grants Programs

The following is a summary of the total number of federal grant and cooperative agreement awards and balances not closed out, but for which the period of performance has elapsed by two years or more prior to September 30, 2021 (i.e., on or before September 30, 2019).

Category	2–3 Years	>3–5 Years	>5 Years
Number of Grants/Cooperative Agreements with Zero Dollar Balances	22	79	73
Number of Grants/Cooperative Agreements with Undisbursed Balances	28	34	9
Total Amount of Undisbursed Balances *(Dollars in Thousands)*	$106	$217	$1

In FY 2021, the FAA continued to review expired grants and made significant progress closing out grants. There are three key management challenges that lead to delays in grant closeouts. These challenges include:

- grant recipient has an audit or pending legal action;
- grant recipients' untimely submission of closeout documentation to the FAA; and
- grants officer training for new FAA personnel.

The FAA continues to monitor grants to ensure that recipients are providing closeout documentation in a timely manner. Monitoring activities include review of closeout progress, financial, audit, and other periodic reports. The FAA also continues to emphasize closing out older grants.

Radio antennas at Daniel K. Inouye International Airport in Hawaii. Photo by Tremayne Cobb.

Administrative Services Franchise Fund

Background

The Department of Transportation and Related Agencies Appropriation Act of 1997 authorized the FAA to establish an Administrative Services Franchise Fund (Franchise Fund). Through the Franchise Fund, the FAA is able to competitively provide a wide variety of support services to various government entities. This results in the consolidation and shared use of like functions and promotes economies of scale. All of these measures help the government use its resources more efficiently.

The FAA's Franchise Fund has grown from $18 million in 1997 to nearly $500 million in annual revenues in FY 2021, with over $1 billion in assets. The Franchise Fund is comprised of several service providers, through which it offers a number of services. These services include administrative services such as accounting, travel, duplication, multimedia, and information technology. Other services include logistics and materiel management, aircraft maintenance, management training, international aviation training, and acquisition support. The Franchise Fund's major customers are programs within the FAA's lines of business, other Department of Transportation (DOT) entities, non-DOT government agencies, and international government entities.

Description of Programs and Services

The Enterprise Services Center (ESC) is based at the Mike Monroney Aeronautical Center (MMAC) in Oklahoma City, Oklahoma. The ESC is a full service financial management provider and designated by the Office of Management and Budget (OMB) as one of four legacy shared service providers to provide financial management services and information systems security services to federal agencies. OMB memorandum M-19-16, *Centralized Mission Support Capabilities for the Federal Government*, established a process for designating agencies as Quality Services Management Offices and directs legacy designated providers, such as the ESC, to propose a joint business case with the Quality Services Management Office designated for financial management to accept any new customers, expand services to existing customers, or make investments in technology or services for these functions.

There are two major components of the ESC — financial services and information services. The efficiencies and economies of scale created by this integration make the ESC an attractive option to government customers seeking a provider of financial management services.

- Financial Services — Offering cost-effective ways to integrate and manage accounting needs, from transaction processing to financial statements, to reporting and analysis. ESC Financial Services helps with regulatory compliance, achieving clean audits, and keeping projects on-time.
- Information Services — Provides a wide array of platforms to manage information. Offers support in: Application Services, Help Desk Services, Data Center Services, Information System Security, Media Solutions, Office Automation Support, Project Management, National Wireless Program, and Telecommunication Services.

The FAA Logistics Center is also located at the MMAC in Oklahoma City, Oklahoma and provides comprehensive logistics support and a sophisticated level of maintenance and repair services to ensure the safety of the flying public, to satisfy the critical needs of the nation's airspace system, and to meet related requirements. The FAA Logistics Center operates the FAA's only distribution center. Services include materiel management (e.g., provisioning, cataloging, acquisition, inventory management, inventory supply), reliable and cost-effective repair of replaceable units, life cycle and performance cost analysis, logistics automation, distribution services, disposal of items no longer required, and technical support to repair and maintain the nation's airspace and related equipment. The Logistics Center also maintains the Department of Homeland Security's (DHS) U.S. Customs and Border Protection border surveillance systems, including more than 80 mobile surveillance systems and fixed towers. It provides supply chain support, depot maintenance support, engineering, and other systems support to the DHS.

Flight Program Operations is also based at the MMAC. This service provider offers total aircraft support, including maintenance, quality assurance, and overall program management, for the FAA's uniquely equipped flight inspection aircraft fleet. Flight Program Operations offers preventative services, aircraft repair, overhaul, and modification services, as well as reliability and maintainability studies. Flight Program Operations has the flexibility to provide either full or partial support, depending upon customer requirements, ranging from short-term preventative maintenance or one-time engineering tasks to more involved activities, such as a full complement of maintenance services, complete with quality assurance and engineering support.

The FAA Leadership and Learning Institute, based in Washington, DC, provides non-technical training in support of the FAA mission. This Institute designs and delivers face-to-face instructor-led training both onsite and at field locations, virtual instructor-led training, web based training, and mobile access. The curriculum of the FAA Leadership and Learning Institute emphasizes workforce development by providing FAA employees with tools to proactively address challenges, share knowledge, and collaborate to meet the mission of the FAA.

The International Training Division (ITD), an element of the FAA Academy, is located at the MMAC in Oklahoma City, Oklahoma. ITD delivers technical assistance and training to enhance international aviation safety and security while promoting U.S. aviation system technologies, products, and services overseas. The products and services of the ITD include training program management, instructional services, training design, development, and revision, technical training evaluations, and consulting services tailored to meet the specifically defined needs of the FAA and its international customers.

The Franchise Fund also houses a branch of acquisition services whose mission is to support the acquisition requirements of the other Franchise Fund service providers.

Corporate Services is the Franchise Fund's program management activity that coordinates and supports the Franchise Fund's operations.

Inter-Entity Cost

The FAA provides general and administrative support services, such as managerial, facilities, and security services to the Franchise Fund that support the Franchise Fund's business type operations. Because these support services are provided to the Franchise Fund at no cost, the Franchise Fund in turn provides services to the FAA at a price less than full cost. The difference between the full cost and the costs billed to the FAA is the overhead rate that the Franchise Fund uses to recover these general and administrative costs, as appropriate, from non-FAA customers.

The estimated cost of the FAA general and administrative support services were $55 million in fiscal year 2021 and $57 million in fiscal year 2020.

Reclassifications

Certain prior year amounts have been reclassified for consistency with the current year presentation.

Passengers in the jetway as they board a commercial airplane at Orlando Sanford International Airport, in Florida. Photo by Joni Hanebutt/Bigstock Images.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ADMINISTRATIVE SERVICES FRANCHISE FUND
COMBINED BALANCE SHEETS

As of September 30, 2021 and 2020
(Dollars in Thousands)
Unaudited

	2021	2020
ASSETS		
Intragovernmental		
Fund balance with Treasury	$ 399,395	$ 400,410
Advances and prepayments	748	1,240
Total intragovernmental	400,143	401,650
Other than intragovernmental/with the public		
Accounts receivable, net	29	16
Inventory and related property, net	730,419	729,964
General property, plant, and equipment, net	12,871	19,617
Total other than intragovernmental/with the public	743,319	749,597
Total assets	$ 1,143,462	$ 1,151,247
LIABILITIES		
Intragovernmental		
Accounts payable	$ 95	$ 300
Advances from others and deferred revenue	294,549	310,486
Other liabilities	3,166	2,945
Total intragovernmental	297,810	313,731
Other than intragovernmental/with the public		
Accounts payable	25,697	25,946
Federal employee benefits payable	289	265
Advances from others and deferred revenue	335	20
Other liabilities	19,612	19,212
Total other than intragovernmental/with the public	45,933	45,443
Total liabilities	$ 343,743	$ 359,174
NET POSITION		
Cumulative results of operations	$ 799,719	$ 792,073
Total net position	799,719	792,073
Total liabilities and net position	$ 1,143,462	$ 1,151,247

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ADMINISTRATIVE SERVICES FRANCHISE FUND
CONSOLIDATED STATEMENTS OF NET COST

For the Years Ended September 30, 2021 and 2020
(Dollars in Thousands)
Unaudited

	2021							
	Enterprise Services Center	Corp Services	Flight Program Operations	FAA Leadership & Learning Institute	International Training	Acquisitions	FAA Logistics Center	Total
Gross costs								
Operating cost	$ 162,109	$ (310)	$ 54,715	$ 6,264	$ 850	$ 4,574	$ 268,868	$ 497,070
Imputed cost (OPM)	4,734	72	959	63	–	220	4,213	10,261
Less earned revenues								
Operating revenue	155,288	–	53,767	6,078	700	3,706	271,006	490,545
Operating profit/(loss) before gains/(losses)	$ (11,555)	$ 238	$ (1,907)	$ (249)	$ (150)	$ (1,088)	$ (2,075)	$ (16,786)
Net gains/(losses)	–	–	–	–	–	–	14,173	14,173
Total profit/(loss)	$ (11,555)	$ 238	$ (1,907)	$ (249)	$ (150)	$ (1,088)	$ 12,098	$ (2,613)

	2020							
	Enterprise Services Center	Corp Services	Flight Program Operations	FAA Leadership & Learning Institute	International Training	Acquisitions	FAA Logistics Center	Total
Gross costs								
Operating cost	$ 163,991	$ (558)	$ 56,481	$ 6,841	$ 1,115	$ 4,558	$ 273,709	$ 506,137
Imputed cost (OPM)	4,345	62	973	30	–	216	3,943	9,569
Less earned revenues								
Operating revenue	158,294	–	52,249	6,655	812	3,278	273,292	494,580
Operating profit/(loss) before gains/(losses)	$ (10,042)	$ 496	$ (5,205)	$ (216)	$ (303)	$ (1,496)	$ (4,360)	$ (21,126)
Net gains/(losses)	(136)	–	–	–	–	–	40,937	40,801
Total profit/(loss)	$ (10,178)	$ 496	$ (5,205)	$ (216)	$ (303)	$ (1,496)	$ 36,577	$ 19,675

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ADMINISTRATIVE SERVICES FRANCHISE FUND
COMBINED STATEMENTS OF CHANGES IN NET POSITION

For the Years Ended September 30, 2021 and 2020
(Dollars in Thousands)
Unaudited

	2021	2020
Cumulative results of operations		
Beginning balances	$ 792,073	$ 763,592
Transfers-in/out without reimbursement	(2)	(763)
Imputed financing	10,261	9,569
Profit/(loss)	(2,613)	19,675
Net change in cumulative results of operations	7,646	28,481
Cumulative results of operations - ending	$ 799,719	$ 792,073
Net position	$ 799,719	$ 792,073

Summary of Inspector General's Top Management and Performance Challenges

The Reports Consolidation Act of 2000 requires the Inspector General (IG) to identify and report annually on the most serious management and performance challenges that federal agencies face. The Department of Transportation (DOT) IG's report, issued at the end of each October, highlights urgent issues facing the entire DOT, of which FAA is one component organization

DOT's FY 2022 Top Management Challenges report

On October 27, 2021 — 13 days before publication of this FAA FY 2021 PAR — the DOT IG issued its forward-looking report identifying the top management and performance challenge areas that DOT would be facing in FY 2022. The IG's finalized report is available on the IG's website at ***https://www.oig.dot.gov/*** and on the FAA's website at ***http://www.faa.gov/about/plans_reports***. The IG identified nine challenge areas in its forward-looking FY 2022 report:

- Aviation Safety
- Surface Transportation Safety
- Air Traffic Control and Airspace Modernization
- Surface Transportation Infrastructure
- Contract and Grant Fund Stewardship
- Information Security
- Financial Management
- Innovation and the Future of Transportation
- Evolving Operations and Workforce Management

Of these nine challenge areas, eight were also identified as top management and performance challenges for the period covered by this PAR, FY 2021. Next year, FAA's PAR will summarize the FAA's FY 2022 actions and accomplishments toward addressing these challenges, as well as what remains for FY 2023 and beyond for each key challenge. In this FY 2021 PAR, we present a summary of the agency's accomplishments and actions taken in FY 2021 toward the challenges applicable to FY 2021.

DOT's FY 2021 Top Management Challenges report

On October 21, 2020, the DOT IG issued its memorandum identifying the top management and performance challenges that DOT would be facing in FY 2021.The IG's memorandum is provided next, and while it is titled "DOT's Fiscal Year 2021 Top Management Challenges," the report addresses both management and performance challenges for the entire department. The pages immediately following contain a summary prepared by the FAA of the challenges specifically applicable to the FAA and the actions it took during FY 2021 to address those FAA-specific challenges. The FAA provides this summary in order to present a comprehensive perspective on the FAA's FY 2021 performance activities and accomplishments towards the challenges that were communicated at the beginning of the fiscal year, and what remains for FY 2022 and beyond.

Air Traffic Controller working at Portland International Airport in Oregon. FAA photo.

U.S. DEPARTMENT OF TRANSPORTATION
OFFICE OF INSPECTOR GENERAL

Memorandum

Date: October 21, 2020

Subject: INFORMATION: DOT's Fiscal Year 2021 Top Management Challenges
Report No. PT2021002

From: Howard R. "Skip" Elliott
Acting Inspector General

To: The Secretary
Deputy Secretary

The United States transportation system is vital to our Nation's economy and way of life, connecting Americans to workplaces, schools, goods and services, and each other. The Department of Transportation (DOT) works to ensure our Nation has the safest, most efficient, and modern transportation system in the world, one that improves our quality of life and increases the productivity of American workers and businesses.

Our office supports the Department's mission through audits and investigations that identify improvements to the management and execution of its transportation programs. Each year, as required by law, we report on DOT's top management challenges to help the Department meet its strategic priorities across its wide-ranging transportation program areas. These priorities include enhancing safety, improving transportation infrastructure, fostering innovation, and promoting accountability.

At the same time, we recognize that the Department faces the new and extraordinary task of meeting these priorities while also responding to the Coronavirus Disease 2019 (COVID-19) global pandemic. The transportation industry has been one of the hardest hit by the pandemic, which has dealt sweeping and likely long-lasting impacts to all sectors, from aviation and public transit to infrastructure construction projects and more. In March 2020, the Coronavirus Aid, Relief, and Economic Security (CARES) Act provided DOT with over $36 billion to prevent, prepare for, and respond to COVID-19. Implementing the act became an immediate priority and a new challenge for the Department.

DOT rose to this challenge by quickly obligating CARES Act funding. As of September 28, 2020, the Department reports that it has obligated more than 93 percent of these funds to our Nation's airports, transit agencies, Amtrak, and other critical recipients.

As we noted in our June 17, 2020, memorandum, we are committed to helping the Department maximize the efficacy of CARES Act funds, recognizing that the speed with which the funds had to be disbursed created new oversight challenges. Undoubtedly, the challenges surrounding COVID-19 and oversight of CARES Act requirements will influence the Department's priorities and actions for years to come. Accordingly, in this year's report, we

have included CARES Act and COVID-19 considerations in all eight of our top management challenges.

For example, the safety of the traveling public remains DOT's top priority, but the pandemic has added new dimensions to the Department's efforts. In the area of aviation, the Department will need to improve oversight of aircraft certification processes and air carrier safety programs, while also reviewing and responding to numerous requests from the industry to update regulations and guidance in response to COVID-19. For surface transportation, DOT must enhance oversight to ensure compliance with vital safety regulations for highway, motor carrier, pipeline, and railroad programs. At the same time, the Department will need to address the economic impacts the pandemic may have on State and local funding for surface transportation safety programs.

Responding to COVID-19 and the CARES Act also increases DOT's existing challenges related to strengthening our Nation's transportation infrastructure. For example, DOT continues its multibillion-dollar investment in efforts to modernize our aging air traffic control network and implement new, advanced capabilities. However, completing these efforts—and achieving their expected benefits—will likely face delays due to the monumental decline in air traffic resulting from COVID-19. In addition, the CARES Act has added an additional $26 billion to the Department's typical $50 billion annual investment in highway, transit, and railroad infrastructure programs. While robust oversight is always critical to ensure that infrastructure projects adhere to Federal requirements, the additional CARES Act projects mean that States and other grantees must place increased emphasis on sound asset and performance management practices.

In addition, because the pandemic could have long-term effects on our transportation system, the Department will need to target some of its innovation priorities to address new and evolving needs. For example, DOT is currently working to oversee the safe integration of Unmanned Aircraft Systems (UAS) in the same airspace as manned aircraft. This challenge is now compounded by the fact that the COVID-19 emergency has increased the sense of urgency to approve expanded use of UAS into daily life, such as delivery of medical goods and supplies.

In light of these heightened challenges, it is more important than ever that the Department focus management attention on its goal of accountability, particularly with regard to efficient use of taxpayer funds. Chief among DOT's challenges will be awarding pandemic relief and other DOT contracts and grants efficiently, effectively, and for intended purposes. The recent influx of new grant funding may also present financial management challenges. For example, DOT will now have to monitor significantly more grants and grantees to continue reducing improper payments and to comply with mandatory reporting requirements. DOT must also ensure it protects the integrity of its financial management information systems to effectively administer and oversee CARES ACT funds while maintaining focus on longstanding cybersecurity weaknesses.

We considered several criteria to identify the Department's top management challenges for fiscal year 2021, including safety impact, documented vulnerabilities, large dollar implications, and the Department's ability to effect change. In the enclosed report, we identify and discuss the following challenge areas:

- Aviation Safety
- Surface Transportation Safety
- Air Traffic Control and Airspace Modernization
- Surface Transportation Infrastructure
- Contract and Grant Fund Stewardship
- Information Security
- Financial Management
- Innovation and the Future of Transportation

As always, we will continue to work closely with DOT officials to support the Department's efforts to improve safety, enhance efficiency, and protect resources, including oversight of the funding provided through the CARES Act. We appreciate the Department's commitment to prompt action in response to the challenges we have identified. This report and the Department's response will be included in DOT's Annual Financial Report, as required by law.

If you have any questions regarding this report, please contact me at (202) 366-1959. You may also contact Barry J. DeWeese, Principal Assistant Inspector General for Auditing and Evaluation, at (202) 366-1302.

cc: DOT Audit Liaison, M-1

Of the 16 key challenges identified by the Inspector General for FY 2021, DOT tasked the FAA with addressing the following 7 challenges:

- **Improving FAA's Oversight of Aircraft Certification Processes**
- **Enhancing Aviation Safety Oversight While Working in a Collaborative Environment**
- **Modernizing New Systems While Introducing New Capabilities**
- **Implementing New Performance Based Navigation (PBN) Flight Procedures and Delivering Benefits to Airspace Users**
- **Awarding Pandemic Relief and Other DOT Contracts and Grants Efficiently, Effectively, and for Intended Purposes**
- **Enhancing Contract and Grant Management and Oversight to Achieve Desired Results and Compliance with Requirements**
- **Ensuring the Safe Integration of UAS in the National Airspace System**

After the Inspector General's report was issued, the FAA coordinated with DOT to develop an "Action Plan" that listed actions and timelines for addressing each of the challenges. The FAA then developed an "Actions Taken" report that describes the progress the FAA made throughout FY 2021 in addressing each of the challenges. These Actions Taken reports, initial Action Plans, and the Inspector General's comprehensive report identifying top management challenges for FY 2021 will be posted on FAA's website at ***http://www.faa.gov/about/plans_reports/*** under the DOT IG Top Management Challenges section.

Improving FAA's Oversight of Aircraft Certification Processes

Why this is a challenge

The expert reviews of the 737 MAX airplane certification and the FAA's internal analysis have highlighted a need to enhance the FAA's oversight of the aircraft certification process, with a focus on safety management systems (SMS), delegation, human factors, and workforce improvements. Advancements in aircraft automation have contributed to an unprecedented level of safety in our domestic aviation system. However, these advancements reaffirm the importance of considering human factors and the interface between pilots and such systems in the certification process. This challenge is moving the FAA toward an integrated approach to aircraft certification that further improves safety.

Progress in meeting the challenge

Safety Management Systems (SMS)

- The FAA initiated rulemaking to mandate SMS for key aviation sectors, including design and manufacturing organizations. Until rulemaking is complete, the FAA will continue to foster and expand voluntary adoption of SMS in design and manufacturing.
- The FAA adopted two new voluntary SMS programs for design and manufacturing.
- The FAA worked with MITRE to develop a new SMS training course for Aircraft Certification Employees. The first course was held in May 2021.

Organization Designation Authorization (ODA)

- The FAA operationalized the Organization Designation Authorization (ODA) Office in April 2021. The office leads strategic efforts to achieve a consistent, risk-based approach to ODA program oversight, achieves performance efficiencies, and aligns ODA oversight policies to legislation. The office focuses on coordination between the FAA's Aircraft Certification Service (AIR) and Flight Standards Service (FS).

System Safety and Human Factors

- The FAA commissioned the Human Factors Coordinating Group (HFCG) that will coordinate with the re-invigorated Center of Excellence for Human Factors and Automation to identify opportunities for workforce training and process enhancements. The HFCG has the expertise to establish parameters and content for education and training curriculum for the broad range of aircraft technologies

and human factors considerations associated with those technologies.

- The FAA had already established a System Safety Implementation team in June 2020. This team is developing a plan to enhance standards, policy, and guidance for system safety assessments (SSAs) utilized in the type-certification of aircraft. SSAs are critical for identifying the range of hazards resulting from aircraft system failures and for mitigating risks posed by such hazards.
- The FAA completed and submitted two statements of work to the Center of Excellence for Technical Training and Human Performance on human factors awareness training; human error review; and analysis of human error methodologies, frameworks, and taxonomies.

Integrated Project Management

- In June 2020, the FAA commissioned the Integrated Program Management Team comprising subject matter experts from FS and AIR to assess current practices and policies and to make recommendations for improving FAA oversight of the integration process between design and operations.
- AIR and FS have established joint monthly program reviews to ensure integration throughout the certification process. The monthly reviews have already proven to be beneficial in increasing awareness and integration between the two services.

Enhancing Safety Oversight

- Under the Safety Oversight and Certification Aviation Rulemaking Committee (SOC ARC), the FAA created a Compliance Assurance System (CAS) working group to establish processes to provide confidence in the fulfillment of all applicable certification requirements for design approvals. The SOC ARC submitted recommendations on CAS to the FAA in spring 2021. The FAA is currently evaluating these recommendations.

Workforce Development

- The FAA updated the Aviation Safety Engineer competencies in 2020, and, in 2021, reviewed and updated the Aviation Safety Inspector competencies to emphasize the need for systems thinking and risk-based decision-making.

Enhancing Data Integration and Sharing

- The FAA initiated a proof-of-concept with a vendor to aggregate data and provide advanced analytic capability to the FAA workforce for the 737 MAX airplane. The FAA plans to use this data to make proactive continued operational safety decisions for the 737 MAX fleet.
- The FAA also completed a number of reviews to advance aviation safety data integration and sharing. The FAA made significant progress on aviation safety data documentation, including continued work on the documentation of aircraft-level data ontology and taxonomy. The FAA also developed a data catalog playbook and data concept of operations that will be applied via the initiation of the Aircraft Stewardship Community of Practice.

What needs to be done

Safety Management Systems

- The FAA plans to issue the Notice of Proposed Rule Making for SMS applicable to 14 Code of Federal Regulations parts 21, 91, 135, and 145 by fall of 2022. The final rule is projected for 2024.

Organization Designation Authorization

- The FAA will issue a new policy in FY 2022 to address the requirements for FAA approval of ODA unit members, eliminating ODA holder interference with unit members and ensuring unrestricted communication.
- The FAA is also finalizing a policy to address the appropriate level of FAA ODA Office oversight based on the risks associated with each ODA's authorized functions, size, and complexity. The FAA will incorporate this policy, along with the policy noted above, into FAA Order 8100.15, which is projected for completion in 2023.
- The FAA is prioritizing policy development to meet the provisions mandated by the 2020 Aircraft Certification, Safety, and Accountability Act. Once this policy development is complete, the FAA will assess the impact on FAA Order 8100.15 revision C and make updates as applicable before starting formal coordination. Updates to the order addressing Office of the Inspector General recommendation #3, requiring applicants to submit failure probability analysis and key assumptions in certification deliverables, are anticipated by March 2023.

System Safety Assessments and Human Factors

- The FAA plans to publish a Notice of Proposed Rule Making for System Safety Assessments by December 2021. This rule will be the baseline for any future Assessments and Human Factors assumption rulemaking and policy.
- The FAA has numerous initiatives in progress and has commissioned a number of internal and external groups to conduct research and develop recommendations to meet

the mandates in the Aircraft Certification, Safety, and Accountability Act of 2020 and various recommendations received from the Boeing 737 MAX investigations. The FAA is committed to completing these activities in a timely manner over the course of the next few years.

Integrated Project Management

- The Integrated Program Management Team will provide recommendations for policy and guidance updates by December 2021. The FAA also plans to initiate an integrated project management prototype between AIR and FS for three type certification projects in FY 2022.
- The FAA will continue the monthly program reviews initiated in FY 2021.

Enhancing Safety Oversight

- The FAA had published the FAA Integrated Oversight Philosophy in June 2017, with the objective to enhance the risk methodology for oversight; enable cross-functional data sharing; integrate oversight planning and activities; and expand the use of voluntary safety programs. Under the auspice of the Integrated Oversight Philosophy, the FAA plans to initiate a prototype with three companies who hold various approvals in 2022.

Workforce Development

- The FAA plans to finalize a program framework and structure for hiring, training, and continuing education for the AIR technical workforce by September 2022.

Enhancing Data Integration and Sharing

- The FAA will continue to enhance current data systems to promote data integration and sharing over the next few years. This includes developing robust data systems to assure feedback loops between operations and maintenance and design and manufacturing. These efforts will align with FAA Flight Plan 21, the agency's upcoming strategic plan, and Enterprise Information Management initiatives.

Enhancing Aviation Safety Oversight While Working in a Collaborative Environment

Why this is a challenge

FAA inspectors face challenges holding operators accountable for regulatory compliance.

Progress in meeting the challenge

Response to Allegiant Air Audit Recommendations

- The FAA initiated compliance actions at Allegiant Air that have improved safety for the flying public, are consistent with FAA's Compliance Program, and are in accordance with Safety Assurance System policies.
  - **Recommendation 1:** Revised FAA Order 8900.1 Volume 10, Chapter 3, Section 1 to require managers to review and validate that known risks documented in the FAA Certificate Holder Assessment Tool are tracked until mitigated. This recommendation was closed on October 23, 2020.
  - **Recommendation 2:** The FAA's Office of Aviation Safety (AVS) monitored compliance with Safety Assurance System training requirements. Safety Assurance System training is a mandatory training requirement for all inspectors. AVS has procedures in place to monitor the completion of mandatory training requirements. This recommendation was closed on November 5, 2020.
  - **Recommendation 3:** FAA updated the policy contained in FAA Order 8900.1 Volume 10 and the guidance contained in the Certificate Holder Evaluation Process, a standard operation procedure. This recommendation was closed on November 5, 2020.
  - **Recommendations 4-6 & 9:** The FAA's Flight Standards Service described how actual or potential outcomes are part of the investigative judgements that influence the decision of the Flight Standards Service investigative personnel to take a compliance or enforcement action. The Flight Standards Service notes that the FAA's action(s) remain focused on correcting the root cause of the non-compliance. The Flight Standards Service indicated how the actual or potential outcomes:
    - Are part of the overall investigation;
    - Provide insight into the root cause(s) of the event; and,
    - Indicate other areas of noncompliance or potential areas of improvement to proactive and reactive risk controls.

- The Flight Standards Service developed and implemented a resolution process to ensure that disagreements in handling non-compliances are dealt with consistently, using the most appropriate processes and all relevant information. The Flight Standards Service updated Order 8900.1, Volume 14 with resolution guidance.

- The FAA also revised inspector guidance to clarify how inspectors address recurring non-compliances as a factor in considering whether they should initiate compliance or enforcement actions. The FAA updated Order 8900.1, Volume 14 with this clarifying information and developed and implemented a process to incorporate historical compliance actions in the Safety Assurance System. This allows inspectors to track current and historical compliance actions. AVS also provided investigative personnel with information on how to determine an aviation personnel compliance history in Order 8900.1.
  - Recommendation 4 was closed on January 13, 2021.
  - Recommendation 5 was closed on November 5, 2020.
  - Recommendation 6 was closed on December 1, 2020.
  - Recommendation 9 was closed on December 2, 2020.

Response to Southwest Airlines Audit Recommendations

- The Southwest Airlines FAA Certificate Management Office did not perform in accordance with existing guidance by allowing 88 aircraft (the "Skyline" aircraft) to enter service through Southwest Airlines' conformity process, which lacked a comprehensive conformity inspection for used aircraft. Regarding performance weight and balance, the Southwest Airlines Certificate Management Office, at times, did not perform in accordance with existing guidance. Once FAA leadership became aware of these issues, the agency took or oversaw various actions to address the safety matters articulated in the Office of the Inspector General draft report.
  - **Recommendations 2 & 3:**
    - Ensured that Level One of the on-the-job training included review of courses the Aviation Safety Inspectors had already attended, pertinent sections of FAA Order 8900.1, as well as reading other articles/books/content related to Level One on-the-job training topics.
    - Ensured that Level Two of the on-the-job training consisted of Policy/Program Offices/Branches conducting presentations and briefings on the related guidance and any changes/updates that have occurred.
    - The Southwest Airlines Certificate Management Office formed a system analysis team with Southwest Airlines to collaboratively identify root causes associated with deviations in their aircraft weighing program. The team identified several root causes and then completed corrective actions to address those root causes. The team was closed on September 15, 2020 following the completion of its work.
    - Recommendation 2 was closed on February 1, 2021.
    - Recommendation 3 was closed on March 30, 2021.
  - **Recommendations 4 & 5:**
    - Mitigated the immediate safety concern by issuing a Notice that required Designated Airworthiness Representatives to use FAA Form 8100.1, Aircraft Conformity Inspection Record. The Notice also requires the representative to forward the record to their Managing Specialist for inclusion into the aircraft records. This action creates greater clarity in how each Designated Airworthiness Representative makes airworthiness determinations.
    - Enhanced Designee training by incorporating the requirements contained within the Notice into Designated Airworthiness Representative initial and recurrent training.
    - Updated FAA Order 8130.2J to include the requirements outlined within the Notice.
    - Recommendations 4 and 5 were closed on May 18, 2021.
  - **Recommendation 6:**
    - Completed a compliance review of other U.S. Standard Airworthiness Certificates for transport category aircraft issued by the Designated Airworthiness Representatives involved in the Southwest Airlines "Skyline" project aircraft. The compliance review focused on aircraft currently operated by other U.S. air carriers.
    - This recommendation was closed on February 1, 2021.
  - **Recommendation 7:**
    - Ensured Southwest Airlines complied with regulatory requirements that the 88 previously owned aircraft conform to U.S. aviation standards.
    - This recommendation was closed on August 3, 2020.

What needs to be done

Response to Allegiant Air Audit Recommendations

- **Recommendation 7:** AVS has revised its inspector guidance to require inspectors to determine that corrective actions taken by air carriers are implemented and have addressed known discrepancies prior to closing compliance actions. The Flight Standards Service has drafted a notice with additional clarifying information. The Notice is expected to be published by November 30, 2021.
- **Recommendation 8:** AVS will perform a comprehensive review of FAA's root cause analysis training to ensure it meets agency expectations. It will also modify training, as appropriate, based on the review, and require inspectors to complete the course(s) or offer inspectors access to industry-based training programs. AVS expects to complete this recommendation by December 31, 2022.

Response to Southwest Airlines Audit Recommendations

- Throughout much of 2020, due to the pandemic, inspectors at the Southwest Airlines Certificate Management Office had not been assigned onsite inspections to verify the performance weight and balance program at various locations throughout the carriers' system. In lieu of onsite inspections, the Certificate Management Office leadership team met weekly (transitioning to bi-weekly toward the beginning of FY 2021) with Southwest Airlines to examine the carriers' Safety Management System data over the past year to closely monitor the effectiveness of the weight and balance mitigations for errors while assessing the overall health of the program.
- **Recommendation 1:** By December 31, 2021 AVS will:
  - Develop a plan to conduct intensive surveillance and review of the approved performance weight and balance program.
  - Initiate a System Analysis Team with Southwest Airlines personnel working collaboratively with Southwest Airlines Certificate Management Office personnel to identify and address root causes of error.
  - Review all employee concerns shared with the Transition Leadership Team related to this topic and ensure the actions outlined will adequately address those concerns.
  - The Certificate Management Office is still monitoring the corrective actions in accordance with the Performance Weight and Balance recommendation. They are conducting bi-weekly update meetings with Southwest Airlines.
- **Recommendation 8:** AVS has accomplished the following actions and has requested the closure of this recommendation:
  - Reinforced Aviation Safety Inspector knowledge of the process contained within the Designee Management System to provide feedback on Designated Airworthiness Representative performance to the Managing Specialist through the publication of the Notice referenced in Recommendations 4 and 5.
  - Enhanced awareness of the ability of all Aviation Safety Inspectors to access the Designee Management System through dedicated communications with Air Carrier Safety Assurance leadership.
  - During the deployment of Group 3 designees within Air Carrier Safety Assurance Offices, the Designee Management System deployment team created additional awareness on the ability to provide feedback to any Management Specialist on the performance of any designee.
- **Recommendations 9 & 10:** By December 31, 2021 AVS will:
  - Strengthen existing policy and guidance in:
    - Volume 10 Safety Assurance System Policy and Procedures
    - Volume 17 Safety Management System
    - AC 120-92 Safety Management Systems for Aviation Service Providers is currently being revised.
  - Ensure instructor guide updates for Course 21000105 (Safety Management System Practical Application Workshop) and 21000150 (Safety Management System Continued Operations Oversight), which provides training on 14 Code of Federal Regulations part 5, Subpart C Safety Risk Management applications.
- **Recommendation 11:** By June 30, 2022, AVS will:
  - Integrate an assessment of safety culture into each data collection tool. While the FAA has not developed a specific inspection for "safety culture," each data collection tool contains a requirement to evaluate "safety values and objectives." All data collection tools include an assessment question on employee "safety ownership." The question's objective is to evaluate the extent to which management effectively communicates its company safety objectives to its employees.
  - Develop a safety culture assessment tool.

Modernizing New Systems While Introducing New Capabilities

Why this is a challenge

The En Route Automation Modernization (ERAM) system is a foundational NextGen system that will improve the efficiency of the nation's airspace system. Technical challenges and schedule delays have hindered FAA's efforts to replace ERAM's original computer hardware and modernize its system software. The COVID-19 pandemic is also impacting ERAM progress.

Another key NextGen capability—Data Communications (DataComm)—was scheduled to be implemented by the end of 2021. Due to the impacts of the 2019 government shutdown, latent air-to-ground interoperability issues, and the new challenge of COVID-19, that timeline has slipped to at least 2023.

Progress in meeting the challenge

- Employing COVID-19 safety precautions and protocols, ERAM technology refresh 2 installations restarted at the key sites in February 2021, and are now complete. An in-service decision was obtained in June 2021, which allowed for installations to continue at the remaining 17 ERAM operational locations.
- In February 2021, the FAA tested and released a software build to support ERAM Sustainment 3, ERAM Enhancements 2, and DataComm Initial Services.
- The FAA also generated a new strategic ERAM software release plan to minimize COVID-19 induced schedule impacts to DataComm Full Services, ERAM Sustainment 3, and ERAM Enhancements 2.
- In order to mitigate the risk of going below acceptable spare component levels, the FAA completed a mini-installation of a subset of tech refresh hardware at seven ERAM locations.
- The FAA deployed software that mitigated operational suitability issues associated with the ERAM technology refresh's display configuration identified at three key sites. These operational suitability issues were associated with off angle viewing of colors and the larger size of the new 43-inch diagonal display. The deployed software changed the color palette to improve off angle viewing and added display of information features that better utilized the 43-inch monitor footprint.
- The DataComm services are ready for activation at the remaining 17 air route traffic control centers once outside personnel are allowed back into the facilities to train the controllers and test the system. Planning for a restart commenced in April 2021. However, due to the most recent surge in COVID-19 cases, there will be additional impacts to the deployment schedule.

What needs to be done

- The ERAM Technology Refresh 2 program is on track to complete all installations at the remaining 17 operational locations by June 30, 2022.
- The next release of software in support of ERAM Sustainment 3 is on track for the March 2022 release to key sites and for ERAM Enhancements 2.
- Release of software for automated handoffs with NavCanada is on track for release to key sites in September 2022.
- For DataComm, once outside staff are allowed back into the facilities to train the controllers and test the system, installations at the remaining 17 operational locations will be completed. The June 30, 2022 milestone will continue to be dependent on access to facilities based on COVID-19 protocols.

Implementing New Performance Based Navigation (PBN) Flight Procedures and Delivering Benefits to Airspace Users

Why this is a challenge

The FAA continues to modernize the nation's airspace system through the multibillion-dollar NextGen program. The FAA still faces challenges with resolving key obstacles to PBN implementation, such as the lack of automated decision support tools for controllers, alignment with aircraft equipage, and the lengthy procedure amendment process. These challenges are being exacerbated by the ongoing impacts of the COVID-19 pandemic that has severely impacted FAA's ability to engage subject matter experts and access air traffic control facilities.

Progress in meeting the challenge

- Collaborated with industry through the NextGen Advisory Committee and developed a Minimum Capabilities List to align aircraft avionics with PBN procedure deployment that was completed in March 2021.
- Introduced automation enhancements to the procedure amendment/development process and decision support

tools to help ensure investment in new/amended procedures aligned with FAA's national strategy. These enhancements also supported the Instrument Flight Procedures Inventory Optimization process that was implemented in June 2021.

- Completed implementation of the Las Vegas Metroplex on February 25, 2021 and closed out the project on September 30, 2021. Las Vegas Metroplex implemented 45 procedures at 4 project airports.
- The South-Central Florida Metroplex implemented 130 procedures for 21 airports in two phases on April 22, 2021 and August 12, 2021. The project started the post-implementation analysis phase on August 13, 2021.

What needs to be done

- Refine sequencing tools at Denver International Airport and implement new sequencing tools at Los Angeles International Airport by August 31, 2022.
- Strengthen trajectory-based operations and PBN procedure integration to maximize benefits to users by July 31, 2022.
- Collaborate with industry to develop a five-year projection for most of the nation's busiest airports to ensure better alignment between airspace infrastructure and projected fleet equipage with an estimated completion by August 31, 2022.
- Invest in additional automation support tools to facilitate more efficient use of instrument flight procedure publication slots by September 30, 2022.
- Complete an Airspace Modernization Roadmap that describes our strategy for modernizing the nation's airspace system with improved air traffic controller tools with an estimated completion by September 30, 2022.

Awarding Pandemic Relief and Other DOT Contracts and Grants Efficiently, Effectively, and for Intended Purposes

Why this is a challenge

FAA's Office of Airports provided economic relief to airports suffering from the dramatic drop in passenger traffic during the pandemic by administering Coronavirus Aid, Relief, and Economic Security (CARES) Act Airport Grants. The top challenge was getting emergency relief funding to airports quickly in order for them to maintain smooth and safe operations.

Progress in meeting the challenge

- FAA administered CARES Act Airport Grants within a month of the enactment of the CARES Act.
- FAA created a website dedicated specifically for airport sponsors regarding their CARES Act Airport Grants frequently asked questions (***https://www.faa.gov/airports/***). Since the inception of the program, FAA has updated its FAQs three times, each time clarifying its requirements as the process matured.
- Initially, FAA had nine part-time employees with airport experience reviewing reimbursement requests and determining eligibility. The team met weekly to discuss issues. Over the past year, FAA hired three former FAA managers to concentrate full-time on reimbursement requests. This experienced team continually meets on a weekly basis with FAA management and compliance staff to discuss common issues and to deliberate on eligibility determinations.
- FAA set up a dedicated email account for CARES Act Airport Grants questions and submissions that is monitored daily. Airport sponsors can ask questions and receive timely answers.
- FAA also awarded a contract to Ernst & Young accounting firm to provide a risk assessment and oversight of program controls for CARES Act Airport Grants.

What needs to be done

- In FY 2021, FAA began reviewing addenda to CARES Act Airport Grants for sponsors seeking to use funds on airport development projects. Because these projects differ from operations and debt service expenses, FAA must spend additional time reviewing these projects and expenses. FAA headquarters works with field staff to ensure these construction projects meet applicable requirements, similar to those required for an Airport Improvement Program project.
- Given that an airport sponsor has four years after it executes a CARES Act Airport Grant agreement to draw down funding, FAA will continue to review and approve expenses for several more years.
- Along with this funding comes oversight. FAA has been working with and will continue to work with auditors to ensure no waste, fraud, and abuse of federal funds occurs.

Enhancing Contract and Grant Management and Oversight to Achieve Desired Results and Compliance with Requirements

Why this is a challenge

The additional CARES Act funding provided to the agency is presenting an additional challenge for FAA to maintain its focus on promoting efficiency and effectiveness in obligating funding through contracts while maximizing best value for taxpayers.

Progress in meeting the challenge

- FAA revised its Acquisition Management System (AMS) in January 2021 to clarify how proposal evaluations and fair and reasonable price determinations should be conducted and documented in the official contract file.
- FAA further revised its AMS in April 2021 to reinforce controls and standards for Independent Government Cost Estimates (IGCE), to include detailing standards to promote compliance and supportability within IGCEs; and reinforce reconciliation actions a program must take when an IGCE substantially varies from the potential contract award.
- Beginning in January 2021, FAA's National Acquisition Evaluation Program amended its processes and checklists to account for changes to AMS for proposal evaluations and reinforce its oversight activities of records supporting contract awards.

What needs to be done

- FAA will continue to apply AMS standards for proposal evaluations, fair and reasonable price determinations, and IGCEs to all agency contract obligations, as applicable in FY 2022 and beyond.
- National Acquisition Evaluation Program evaluations for FY 2022 and beyond will continue to account for proposal evaluations and appropriate records management.

Ensuring the Safe Integration of Unmanned Aircraft Systems (UAS) in the National Airspace System

Why this is a challenge

A top Department of Transportation (DOT) priority is to guide the country into the future of transportation through innovation. Emerging technologies and innovative approaches to such areas as financing and project delivery will ultimately transform how DOT carries out its mission, shapes its workforce, and deploys resources. One immediate challenge is stewarding the fast pace and scope of emerging technologies in vehicle automation and UAS as they are integrated into the nation's air transportation system. These technologies have the potential for long-term benefits but also pose new safety, oversight, and regulatory challenges.

Progress in meeting the challenge

UAS Integration Pilot Program (IPP)

- The IPP Final Report was developed and coordinated within FAA and with DOT's Office of the Secretary of Transportation (OST). It details progress made, accomplishments, challenges, and lessons learned from the 3-year program. Currently, FAA's Office of the Administrator is reviewing an OST-edited draft of the report.

BEYOND Program

- The BEYOND Program is focused on enabling UAS beyond visual line-of-sight operations, and collecting and utilizing data pertaining to community engagement best practices and the societal and economic benefits of UAS operations. The FAA has developed a comprehensive data analysis plan connecting data collection efforts, the lines of business requiring the data, and the policy and decision-making efforts for which the data will be used.
- The FAA worked with eight lead participants representing state, local and tribal governments, on community engagement plans to collect and address community sentiment toward UAS use, and explain UAS planned operations in their communities. FAA and the lead participants also developed societal and economic data plans to assess UAS uses and the FAA built quantitative and qualitative measures on the potential and actual societal and economic impacts of varying UAS operations.

Rulemaking

- On December 28, 2020, the FAA issued the final rules for Remote Identification (ID) and Operations Over People; both were effective April 21, 2021. These rules are crucial to the agency's UAS integration efforts of moving toward longer-term, more routine, and complex operations, including package delivery services and urban air mobility.
- On June 8, 2021, the FAA chartered a UAS Beyond Visual Line of Sight Aviation Rulemaking Committee. This committee is tasked with providing recommendations for safe, scalable, economically viable and environmentally advantageous beyond-visual-line-of-sight operations. The recommendations are due to the FAA by November 30, 2021.

Enhance Outreach

The FAA initiated several programs to provide support to stakeholders, including:

- The UAS Support Center case management system to gather improved and more actionable data that will be used to inform targeted outreach initiatives.
- DroneZone Application: FAA successfully launched major updates to the application to implement UAS Remote ID requirements. We are also developing an application that community based organizations can use to request recognition by the FAA. An additional application is being developed for community based organizations and educational institutions that want to apply for FAA-Recognized Identification Areas in order to comply with the Remote ID rule. Both efforts are on schedule to deploy on time.
- College Training Initiative (CTI): Launched April 30, 2020, the newest college training initiative program was designed to prepare students for careers in UAS.
  - 150 requests to participate have been received since April 2020 (includes the number of schools currently participating).
  - Of the 84 colleges and institutions currently participating in the program, 21 are minority serving institutions.
  - The FAA has held approximately 125 meetings, conferences, and webinars with interested colleges and universities, organizations/associations, industry and UAS educational service providers since April 2020.
  - An online resource portal for the UAS-CTI is hosted by the National Center for Autonomous Technologies, a National Science Foundation Advanced Technological Education grant-funded center.
- Droning On Initiative: The FAA is meeting twice per month with public safety and recreational flyer stakeholders to share best practices and collaborate on targeted outreach initiatives. Topics focus on UAS safety culture and building UAS programs. The initiative Droning On After Dark is rolling out as part of Drone Safety Awareness Week to include special emphasis on UAS racing and input from UAS social media influencers.
- The Connected by Drones Initiative is a grass-roots approach for bringing governments together to discuss all things UAS. A vision for this group is to learn and understand what types of operations are happening in their jurisdictions and to share best practices. The first meeting of the group had 135 persons in attendance; a planning committee was established; and 6 meetings and webinars have occurred since, covering topics such as new FAA rules, the Public Aircraft Operations/Certificate of Authorization process, and public safety. An online resource portal for Connected by Drones is hosted by the National Center for Autonomous Technologies for sharing information.

What needs to be done

BEYOND Program

- The FAA will continue to work with lead participants on the following challenges:
  - Current detect-and-avoid solutions cannot provide adequate detection at long ranges, do not meet size, weight, and power requirements for smaller UAS, and are cost-prohibitive.
  - New Operations Over People/Operations Over Moving Vehicle regulations are slowing the advancement of operations.
  - FAA policy for use, dissemination, and security remains unclear for public lead participant access to FAA Radar Data.
  - Challenges navigating certification compliance.
  - FAA's reluctance to provide clear guidance on its acceptance of industry standards impedes operations.
  - Lead participants would like to see progress in updated FAA systems, policies, and procedures to enable larger UAS (above 55 lbs.), or optionally piloted aircraft which is a hybrid between a conventional piloted aircraft and an unmanned aerial vehicle.

Rulemaking

- Remote ID Implementation
  - By September 16, 2022: UAS manufacturers must comply with the final rule's requirements for them.
  - By September 16, 2023: All UAS pilots must meet the operating requirements of the Remote ID rule. For most operators, this will mean flying a standard Remote ID UAS, equipped with a broadcast module, or flying at an FAA-recognized identification area.
- The FAA will receive/review recommendations for performance-based regulatory requirements to normalize safe, scalable, economically viable, and environmentally advantageous UAS beyond-visual-line-of-sight operations that are not under positive air traffic control. The FAA proposes taking recommendations, initiating rulemaking, and having concurrence on all major policy decisions by the end of FY 2022.

List of Acronyms and Abbreviations

AAE	The FAA Office of Audit and Evaluation
AAM	Advanced Air Mobility
AATF	Airport and Airway Trust Fund
ACR	The FAA Office of Civil Rights
AFN	The FAA Office of Finance and Management
AGC	The FAA Office of the Chief Counsel
AGI	The FAA Office of Government and Industry Affairs
AHR	The FAA Office of Human Resource Management
AIP	Airport Improvement Program
AIR	Aircraft Certification Service
AMS	Acquisition Management System
ANG	The FAA Office of NextGen
AOC	The FAA Office of Communications
APL	FAA Office of Policy, International Affairs and Environment
ARC	Aviation Rulemaking Committee
ARP	Office of Airports (FAA line of business)
ARPA	American Rescue Plan Act of 2021
ARTCC	Air Route Traffic Control Center
ASH	Office of Security and Hazardous Materials Safety (FAA line of business)
ASIAS	Aviation Safety Information Analysis and Sharing
AST	Office of Commercial Space Transportation (FAA line of business)
ATCT	Air Traffic Control Tower
ATO	Air Traffic Organization (FAA line of business)
AVS	Aviation Safety Organization (FAA line of business)
AVSED	Aviation and Space Education
BVLOS	Beyond Visual Line-of-Sight Operations
CAASD	Center for Advanced Aviation System Development
CAPSCA	Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation
CARES	Coronavirus Aid, Relief, and Economic Security Act
CART	Council Aviation Recovery Task Force
CAS	Compliance Assurance System
CAST	Commercial Aviation Safety Team
CEAR	Certificate of Excellence in Accountability Reporting
CFO	Chief Financial Officer
CLEEN	Continuous Lower Energy, Emissions, and Noise Program
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CRWG	Crisis Response Working Group
CRRSA	The Coronavirus Response and Relief Supplemental Appropriations Act, 2021
CSRS	Civil Service Retirement System
CTI	College Training Initiative
DAC	Drone Advisory Committee
DataComm	Data Communications
DELPHI	DOT's Financial Management System
DHS	U.S. Department of Homeland Security
DLRW	Dynamic Launch/Reentry Windows
DOD	U.S. Department of Defense
DOL	U.S. Department of Labor
DOS	Department of State
DOT	U.S. Department of Transportation
DST	Drone Safety Team
E	Electronic
EB	Executive Board
EMAS	Engineered Material Arrestor System
ERAM	En Route Automation Modernization
ESC	Enterprise Services Center
F&E	Facilities and Equipment
FAA	Federal Aviation Administration
FAASTeam	FAA Safety Team
FECA	Federal Employees' Compensation Act
FERS	Federal Employees Retirement System
FFMIA	Federal Financial Management Improvement Act of 1996
FFRDC	Federally Funded Research and Development Center
FMFIA	Federal Managers' Financial Integrity Act of 1982
Franchise Fund	Administrative Services Franchise Fund
FS	Flight Standards Service

FY	Fiscal Year
GA	General Aviation
GAAP	Generally Accepted Accounting Principles
GAJSC	General Aviation Joint Steering Committee
GPS	Global Positioning System
GSA	General Services Administration
HAZMAT	Hazardous Materials
HFCG	Human Factors Coordinating Group
HLCC	High Level Conference on COVID-19
ICAO	International Civil Aviation Organization
IG	Inspector General
IGCE	Independent Government Cost Estimates
IMT	Incident Management Team
IPP	Integration Pilot Program
IRS	Internal Revenue Service
ISS	International Space Station
IT	Information Technology
ITD	International Training Division
JRC	Joint Resources Council
MMAC	Mike Monroney Aeronautical Center
MITRE	The MITRE Corporation
MRV	Monitoring, Reporting, and Verification
MSI	Minority Serving Institutions
NAC	NextGen Advisory Committee
NASA	National Aeronautics and Space Administration
NextGen	Next Generation Air Transportation System
NOTAM	Notices to Airmen
NTSB	National Transportation Safety Board
OCI	Oracle/Compusearch Integration
ODA	Organization Designation Authorization
OIG	Office of the Inspector General
OMB	Office of Management and Budget
OPM	Office of Personnel Management
OST	DOT's Office of the Secretary of Transportation
PAR	Performance and Accountability Report
PBN	Performance Based Navigation
PIIA	Payment Integrity Information Act of 2019
PP&E	Property, Plant, and Equipment
PRAC	Pandemic Response Accountability Committee
PRISM	Procurement Information System for Management (internet-based acquisition system integrated with DELPHI)
Radar	Radio detection and ranging
RE&D	Research, Engineering, and Development
Remote ID	Remote Identification
RFI	Request for Information
RIM	Runway Incursion Mitigation
RPA	Robotic Process Automation
RSA	Runway Safety Area
SAVES	Strategic Sourcing for the Acquisition of Various Equipment and Supplies
SC	Steering Committee
SDI	Space Data Integrator
SMS	Safety Management Systems
SMTS	Safety Management Tracking System
SOC ARC	Safety Oversight and Certification Aviation Rulemaking Committee
SSAs	System Safety Assessments
STEM	Science, Technology, Engineering, and Math
SUAS	Small Unmanned Aircraft Systems
TBLP	Time-Based Launch/Reentry Procedures
Technical Center	William J. Hughes Technical Center
TFDM	Terminal Flight Data Manager
TRACON	Terminal Radar Approach Control
UAS	Unmanned Aircraft Systems
UAS BVLOS ARC	Unmanned Aircraft Systems Beyond Visual Line-of-Sight Operations Aviation Rulemaking Committee
UN	United Nations
U.S.C.	United States Code
USHST	The U.S. Helicopter Safety Team
VERA	Voluntary Early Retirement Authority
VSIP	Voluntary Separation Incentive Payments
WJHTC	William J. Hughes Technical Center

WE WELCOME YOUR COMMENTS

Thank you for your interest

in the FAA's FY 2021 Performance and Accountability Report.

We welcome your comments on how we can make this report more informative for our readers.

Please send your comments to:

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